# 5 Implementation

*Chapter Outline:*



## 5.0 Overview

Implementation of the Johnston County section of the Mountains-to-Sea Trail will require a cooperative effort among state and local governments, working in partnership with landowners along the route. The purpose of this chapter is to define strategies that will lead to future development of the trail. Key strategies include securing trail right-of-way, identifying and setting aside funding for trail construction, and instituting public safety and management plans for the constructed trail. It is anticipated that the trail will be developed in phases, with initial phases occurring in Clayton and Smithfield. Subsequent phases will occur in more rural areas of Johnston County after trail right-of-way has been secured.

## 5.1 Client Team Action Plan

There are several early actions that the client team needs to take to begin the implementation process. First, the towns of Smithfield and Clayton need to have this master plan accepted and adopted as an element of their comprehensive plan. The same is true for Johnston County. Adopting this plan enables these communities to gain access to state and federal funds that support trail construction.

The next step will be for each jurisdiction to work on early phase development of the "mainline" segments of the trail, which are shown in detail in the last section of this chapter. For Smithfield and Clayton, this involves the development of specific trail segments, including "town trails" that connect the towns to the Neuse River corridor. For Johnston County, this first step will involve working with landowners to secure trail right-of-way and then subsequently building trail segments.

The following pages (52-55) outline specific near-term, mid-term, and long-term action steps for each participating government agency to implement this plan. The short term strategies include pilot projects that *could* be funded by NCDOT, with an expected equitable allocation of funds between Johnston County, the Town of Clayton and the Town of Smithfield.

**MST Projects for the Town of Clayton**

The Town of Clayton is committed to developing a section of the MST through the center of its community, to take advantage of the economic, transportation and recreation benefits that this will provide. Clayton's pilot project includes a mile of trail from Covered Bridge Road to "Sam's Branch" Greenway (named for the tributary stream that connects Downtown Clayton to the Neuse River). Segment 3 (see page 73) illustrates the routing of this portion of trail along the Neuse River.

*For Segment maps, please refer to pages 73-113.*

As part of this pilot project, the Town of Clayton and NCDOT will design a bicycle/pedestrian bridge over the Neuse River, near Covered Bridge Road (also part of Segment 3). Initially, this bridge will connect the existing subdivisions on the east side of the river with Sam's Branch Greenway and Downtown Clayton on the west side. In the long-term, the bridge will also provide connections for the planned unit developments (already under construction), and possibly to a future Mark's Creek Greenway.

Another priority project for the Town of Clayton involves the 'on-road' portion of trail through town (Segments 4 and 5) with a side path that runs along NC 42 (Segments 6 and 7). The on-road portion will consist of sidewalk improvements and a signed bike route, while the side path is to be included in the future widening of NC 42. These improvements will provide greater connectivity for residents in downtown and southeastern Clayton.

**MST Projects for the Town of Smithfield**

The Town of Smithfield has identified several near term projects for implementation of the MST. First, as the Buffalo Creek Greenway is completed, the Town of Smithfield aims to connect that greenway to the Neuse River and the MST corridor by crossing Buffalo Road and continuing the trail through Smithfield Middle School (in Segment 16).

Also, as one of the key features of Johnston County's MST, the existing trail at Town Commons, which is currently sub-standard and in need of repair, will be upgraded with the same cross section consistent with the rest of the MST: 10'-wide paved asphalt with 2' wide gravel shoulders (Segment 17).

Finally, the proposed MST mainline segments south of the town (Segments 19 and 20) are identified by NCDOT as having strong potential for a pilot project, since these portions of trail run along the Neuse River. Once completed, an on-road route along Second Street and Sanders Street will link the existing trail at Town Commons to this new portion along the river.

## Johnston County Trail Right-of-Way

Johnston County can begin immediately working with landowners along the proposed route of the MST to secure trail right-of-way. Trail segments 7 through 15 illustrate the route and alignment for the County to focus on. It is recommended that a minimum of 100-feet of trail right-of-way be secured by the County to provide enough space to both develop the trail and provide ample separation between the trail and private landowners.

### JOHNSTON COUNTY MST ACTION STEPS

| TASKS | LEAD AGENCY AND SUPPORT GROUPS | DETAILS | APPROXIMATE TIMELINE | PAGE REFERENCES |
|---|---|---|---|---|
| **INITIAL ACTION STEPS** | | | | |
| Adopt this Plan as an element of town and county comprehensive plans. | **Town of Clayton Planning Department, Town of Smithfield Planning Department, Johnston County Planning Department** Support Groups: clubs, businesses and non-profits related to recreation, tourism, conservation and the environment/outdoors | Information should be provided to town and county councils before review for adoption, including: 1) Letters of support for the plan from local organizations and citizen groups 2) The Johnston County Greenway Benefits Brochure and 3) The Executive Summary | **Complete by mid-November 2006** | Page 51 |
| Determine who will lead implementation | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) | This person should be active in setting up and organizing project team meetings on at least a quarterly basis to carry out initial action steps encourage continued progress in implementation. | **Complete by November 2006** | See the 'Acknowledgements' page for project contributors as of September 2006 |
| Continue to hold MST Project Team Meetings | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) | At each meeting, team members should be prepared to 1) discuss progress since previous meeting 2) identify problems encountered and potential solutions, and 3) set goals to meet by the next quarterly meeting | **Continuous process** (Begin no later than Fall 2006) | See the 'Acknowledgements' page for project contributors as of September 2006 |
| Designate (or employ) staff to carry out trail implementation tasks. | **Town of Clayton Planning Department, Town of Smithfield Planning Department, Johnston County Planning Department** | Recommend using current Planning Department staff where/when possible. | **Designate staff by November 2006 and/or employ staff by early 2007** | N/A |
| Partner with a local land trust and/or land manager. | **Town of Clayton Planning Department, Town of Smithfield Planning Department, Johnston County Planning Department** | 1) Identify potential partner agencies 2) Meet and define mutual goals 3) Outline strategy for land/project corridor conservation | **Begin no later than November 2006** | Pages 55-59 |
| Meet with local stakeholders to implement plan. | **Town of Clayton Planning Department, Town of Smithfield Planning Department, Johnston County Planning Department** Support group: Local Land Trusts | 1) Identify potential stakeholders, such as landowners, local business leaders, key political figures, and local community leaders 2) Work with local land trusts to build alliances with landowners | **Ongoing; Begin no later than November2006** | Chapter 2 and Pages 55 56 |
| Identify specific funding sources for implementation | **Town of Clayton Planning Department, Town of Smithfield Planning Department, Johnston County Planning Department** | Appendix C identifies nearly forty different potential sources for funding; Cost estimates are provided by trail segment at the end of Chapter 5. | **Begin no later than December 2006** | Appendix C and Pages 74-113 |
| Make changes to County development code regarding the current interpretation of 'trails' as structures and regarding 'greenways' in adopted plans. | **Johnston County Planning Department** | Intent is to establish rational interpretation of the land development code to reduce flood hazards and encourage trail implementation. | **Begin no later than December 2006** | Pages A-1 and A-4 |
| Establish an information exchange and MST promotion program with local chambers of commerce | **Town of Clayton Planning Department, Town of Smithfield Planning Department, Johnston County Planning Department** | Regularly scheduled updates on project progress to promote the MST locally and regionally (could coincide with Project Team meetings) | **Continuous process ; Begin no later than December 2006** | Chapter 2 and *Benefits of Greenways Brochure* |
| **SHORT TERM STRATEGIES (FY 06-08)** | | | | |
| Build trail along Neuse River (in Segment 3) | **Town of Clayton Planning Department** Support Group: NCDOT | 1) Set up meeting with NCDOT to secure funding. 2) Secure right-of-way from Sam's Branch to Covered Bridge Road along west side of the Neuse River, 3) Survey and flag centerline, 4) Build trail | **Ongoing until built; Begin step 1 no later than December 2006** | Pages 22 and 42; Page 78 outlines route |
| Design & build signature bike/ped bridge over the Neuse River (in Segment 3) | **Town of Clayton Planning Department** Support Group: NCDOT | 1) Acquire right-of-way; 2) Work with NCDOT to design the bridge; 3) Secure funding required to build the bridge; 4) Begin construction. | **Ongoing until built; Begin step 1 no later than December 2006** | Pages 22 and 42; Page 78 outlines associated cost-estimates for the bridge abutments and bridge deck. |
| Connect the MST/Buffalo Creek Greenway to the Neuse River (in Segment 16). | **Town of Smithfield Planning Department** Support Group: NCDOT | 1) Set up meeting with NCDOT to secure funding. 2) Secure right-of-way, 3) Survey and flag centerline, 4) Build trail and crossing improvements (at Buffalo Road near Smithfield Community Park and Smithfield Middle School). | **Ongoing until built; Begin step 1 no later than December 2006** | Pages 48-49 and Page 105 |
| Build trail along Neuse River (in Segments 19 and 20), including an interpretive area/destination for the MST | **Town of Smithfield Planning Department** Support Group: and TOS Parks and Recreation, NCDENR, and local historical/cultural organizations | 1) Identify outside funding sources, 2) Set up meeting with NCDOT to secure additional funding, 3) Acquire right-of-way; 4) develop a conceptual plan for the interpretive site; 5) survey and flag the trail centerline; 6) build the trail and interpretive site | **Ongoing until built; Begin step 1 no later than December 2006** | Pages 28-29, 48-49, and 110-113 |
| Upgrade existing Town Commons Trail along the Neuse River with standard cross section. | **Town of Smithfield Planning Department** Support Groups: NCDOT and NCDENR | 1) Set up meeting with NCDOT to secure funding (incorporating TIP funds), 2) Demolish and remove old trail. 3) Build new 10' wide paved asphalt trail with 2' wide gravel shoulders | **Ongoing until built; Begin step 1 no later than December 2006** | Pages 52-53 and 106-107 |
| Develop a paddle trail access site (trailhead) on the Neuse River at the Fire Department Road bridge (a.k.a. Wilson Road bridge). | **Johnston County Planning Department** Support Group: NCDENR | 1) Set up meeting with NCDOT and NCDENR to secure funding, 2) Secure right-of way, 3) Develop a conceptual plan for the site; 4) Develop construction documents; 5) Make improvements to the site. | **Ongoing until built; Begin step 1 no later than December 2006** | Pages 24-25, 35, 44-45, 94-95 |
| Continue greenway projects already underway in Clayton and Smithfield | **Clayton and Smithfield Planning Departments** | Begin construction documents for Sam's Branch Greenway in Clayton and continue construction of Buffalo Creek Greenway | **Ongoing until built; Begin construction of Sam's Branch Greenway by Summer 2007** | Pages 22-23, 28-29, 42 43, 48-49, 52-53, 78-81, 104-107 |
| Institute public safety and management regulations for the Johnston County MST | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) | Draw from text and language recommended in Chapter 5, section 5.3 to develop a safety and management policy document to be endorsed by the county and all participating towns. | **Complete by Summer 2007** | Pages 60-70 |

# Johnston County MST Action Steps (Cont'd)

| Tasks | Lead Agency and Support Groups | Details | Approximate Timeline | Page References |
|---|---|---|---|---|
| **Short Term Strategies (FY 06-08) - Continued** | | | | |
| Develop a paddle trail access site (trailhead) at the future Town of Clayton property south of Covered Bridge Road (at confluence of Sam's Branch and the Neuse River). | **Town of Clayton Planning Department** Support Group: NCDENR and TOC Parks and Recreation | 1) Develop a conceptual plan for the site (in Segment 3); 2) Secure funding; 3) Develop construction documents; 4) Make improvements to the site. | **Begin no later than Fall 2007** | Pages 22-23, 35, 42-43, 78-79 |
| Enhance the paddle trail access site (trailhead) on the Neuse River at NC 42 | **Johnston County Planning Department** Support Group: NCDENR | 1) Set up meetings with NCDOT and NCDENR to develop and coordinate a conceptual plan for the site; 2) Identify funding sources; 3) Develop construction documents; 4) Make improvements to the site. | **Begin no later than 2008** | Pages 22-23, 35, 45, 86-87 |
| Provide On-Road improvements in Clayton to safely connect to and encourage use of MST/Sam's Branch Greenway | **Town of Clayton Planning Department** Support Group: NCDOT | 1) Identify outside funding sources, 2) Set up meeting with NCDOT to secure additional funding, 3) Make improvements | **Begin no later than 2008** | Pages 42-43, 80-83, B6 B7 |
| Provide On-Road improvements to Second and Sanders Street to safely connect to and encourage use of MST, south of Downtown | **Town of Smithfield Planning Department** Support Group: NCDOT | 1) Identify outside funding sources, 2) Set up meeting with NCDOT to secure additional funding, 3) Make improvements | **Begin no later than 2008** | Pages 48-49, 108-109, B6-B7 |
| Provide a sidepath in the future NCDOT widening of NC 42 *and* bike/ped accommodations on the future NC 42 bridge over the Neuse River. | **NCDOT** Support Group: Town of Clayton | 1) Advocate for the inclusion of the sidepath and bridge accommodations during the design stage, 2) Include said facility recommendations in all related town planning documents, 3) follow the design and implementation stages of the NC 42 widening to ensure inclusion of said facilities. | **Continuous process** | Pages 44-45 and Pages 84-87 |
| Pursue acquisition projects for MST segments | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) Support Groups: Local Land Trusts | Focus on priority segments where right-of-way does not exist or is not expected to exist in the near future | **Continuous process** | Pages 55-59 |
| **Mid-Term Strategies (FY09-11)** | | | | |
| Continue to hold MST Project Team Meetings | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) | Continue meetings; develop and implement promotional strategy for the completed portions of land and water-based trail, relying on local partnerships, stakeholders, and volunteers | **Continuous process** | N/A |
| Pursue acquisition projects for remaining MST segments | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) Support Groups: Local Land Trusts | Focus on priority segments in Smithfield and Clayton that remain incomplete. | **Continuous process** | Pages 55-59 |
| Update Cost Estimates | **Town of Clayton Planning Department, Town of Smithfield Planning Department, Johnston County Planning Department** | Using spreadsheets created in 2006, add in 2009 figures for construction and/or materials; Use experience from short-term project implementation. | **Complete by FY 2009** | pp. 74-113 |
| Update and identify funding sources for mid-term projects | **Town of Clayton Planning Department, Town of Smithfield Planning Department, Johnston County Planning Department** | Appendix C identifies nearly forty different potential sources for funding in 2006; Use new, 2009 cost estimates | **Complete by FY 2009** | Appendix C; pp. 74-113 |
| By 2011, the entire MST Plan should undergo a thorough review and evaluation to ensure that it is up to date. | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) | The existing conditions will need to be updated for new opportunities and constraints; recommendations will need to be re-prioritized. | **Begin in 2011** | N/A |
| **Long Term Strategies (FY12-16)** | | | | |
| Continue to hold MST Project Team Meetings | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) | Continue meetings; Concentrate on filling gaps in the built-trail network and look to regional and/or countywide connections | **Continuous process** | N/A |
| Pursue new tasks/priority projects identified in the 2011 Johnston County MST Update | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) | New tasks could include new spur/town connector trails; regional connector trails, trail management and maintenance; expanding marketing and promotion, etc. | **Continuous process** | N/A |
| Pursue acquisition projects identified in the 2011 Johnston County MST Update | **Project Team** (Staff from the Town of Clayton, Town of Smithfield, Johnston County, NCDOT Bike/Ped Division, NCDENR State Parks and Recreation) Support Groups: Local Land Trusts | Focus on remaining acquisition in segments 8-15 | **Continuous process** | Pages 55-59 |

The County will most likely acquire much of the needed trail right-of-way as landowners submit residential, commercial and retail land development plans for approval. This chapter of the master plan offers some different strategies that landowners and the County may want to consider in order to secure trail right-of-way.

Aside from securing trail right-of-way, Johnston County can also work with the North Carolina Department of Environment and Natural Resources (NCDENR) and the Town of Clayton to establish paddle trail access sites along the Neuse River. Three sites have been identified as having strong potential for future river access:

-First, the potential paddle trail access site at Fire Department Road (a.k.a. Wilson Road) Bridge is noted on pages 20, 24, 35 and 44, and is located in Segment 11. This should be considered Johnston County's pilot project for implementation.

-Second, the potential paddle trail access site near Covered Bridge Road (in Segment 3) is described on pages 19, 22, 35 and 42.

-Third, the existing paddle trail access site at NC 42 (in Segment 7) could benefit from improvements described on pages, 19, 22, and 35.

## 5.2 Methods for Securing Trail Right-of-Way

There are many different ways for the County, Smithfield and Clayton to secure trail right-of-way for the MST. The recommended alignment of the MST follows publicly owned land wherever possible. However, it will be necessary to work with landowners along the entire route to secure trail right-of-way. The following text provides a list of options that should be considered in securing right-of-way for the MST. Funding sources for acquiring right-of-way and trail development are described and provided in Appendix C of this master plan.

The following sections detail a list of specific strategies including the formation of partnerships and a toolbox of acquisition options.

### 5.2.1 Partnerships

The municipalities of Johnston County should pursue partnerships with land trusts and land managers to make more effective use of their land acquisition funds and strategies. The following offers recommendations on how these partnerships could be strengthened

#### Land Trusts

Land trust organizations, such as the Triangle Land Conservancy and the Trust for Public Lands, to name just two, are valuable partners, when it comes to acquiring land and rights-of-way for greenways. These groups can work directly with landowners and conduct their business in private so that sensitive land transactions are handled in an appropriate manner. Once the transaction has occurred, the land trust will usually convey the acquired land or easement to a public agency, such as a town or county for permanent stewardship and ownership.

#### Private Land Managers

Another possible partnership that could be strengthened would be with the utility companies that manage land throughout Johnston County. Trails and greenways can be built on rights-of-ways that are either owned or leased by electric and natural gas companies. Electric utility companies have long recognized the value of partnering with both local communities, non-profit trail organizations and private land owners to permit their rights-of-ways to be used for trail development. This has occurred all over the United States and throughout North Carolina.

The Towns and municipalities of Johnston County should actively update and maintain relationships with private utility and land managers to ensure that community wide bicycle, pedestrian and greenway system can be accommodated within these rights-of-way. The respective municipalities will need to demonstrate to these companies that maintenance will be addressed, liability will be reduced and minimized and access to utility needs will be provided.

5.2.2 Greenway Acquisition Tools

The following menu of tools describe various methods of acquisition that can be used by landowners, land conservation organizations, the Town of Clayton, the Town of Smithfield, Johnston County and other municipalities to acquire greenway lands.

Land Management

Management is a method of conserving the resources of a specific greenway parcel by an established set of policies called management plans for publicly owned greenway land or through easements with private property owners. Property owners who grant easements retain all rights to the property except those which have been described in the terms of the easement. The property owner is responsible for all taxes associated with the property, less the value of the easement granted. Easements are generally restricted to certain portions of the property, although in certain cases an easement can be applied to an entire parcel of land. Easements are transferable through title transactions, thus the easement remains in effect perpetually.

Management Plans: The purpose of a management plan is to establish legally binding contracts which define the specific use, treatment, and protection for publicly owned greenway lands. Management plans should identify valuable resources; determine compatible uses for the parcel; determine administrative needs of the parcel, such as maintenance, security, and funding requirements; and recommend short-term and long-term action plans for the treatment and protection of greenway lands.

Conservation Easement: This type of easement generally establishes permanent limits on the use and development of land to protect the natural resources of that land. When public access to the easement is desired, a clause defining the conditions of public access can be added to the terms of the easement. Dedicated conservation easements can qualify for both federal income tax deductions and state tax credits. Tax deductions are allowed by the Federal government for donations of certain conservation easements. The donation may reduce the donor's taxable income.

Preservation Easement: This type of easement is intended to protect the historical integrity of a structure or important elements in the landscape by sound management practices. When public access to the easement is desired, a clause defining the conditions of public access can be added to the terms of the easement. Preservation easements may qualify for the same federal income tax deductions and state tax credits as conservation easements.

Public Access Easements: This type of easement grants public access to a specific parcel of property when a conservation or preservation easement is not necessary. The conditions of use are defined in the terms of the public access easement.

Government Regulation
Regulation is defined as the government's ability to control the use and development of land through legislative powers. The following types of development ordinances are regulatory tools that can meet the challenges of projected suburban growth and development as well as conserve and protect greenway resources.

Dedication/Density Transfers: Also known as incentive zoning, this mechanism allows greenways to be dedicated for density transfers on development of a property. The potential for improving or subdividing part or all of a parcel of property, can be expressed in dwelling unit equivalents or other measures of development density or intensity. Known as density transfers, these dwelling unit equivalents may be relocated to other portions of the same parcel or to contiguous land that is part of a common development plan. Dedicated density transfers can also be conveyed to subsequent holders if properly noted as transfer deeds.

Negotiated Dedications: This type of mechanism allows municipalities to negotiate with landowners for certain parcels of land that are deemed beneficial to the protection and preservation of specific stream corridors. This type of mechanism can also be exercised through dedication of greenway lands when a parcel is subdivided. Such dedications would be proportionate to the relationship between the impact of the subdivision on community services and the percentage of land required for dedication-as defined by the US Supreme Court in Dolan v Tigard.

Fee-in-Lieu: To complement negotiated dedications, a fee-in-lieu program may be necessary to serve as a funding source for other land acquisition pursuits. Based on the density of development, this program allows a developer the alternative of paying money for the development/protection of greenways in lieu of dedicating greenway lands. This money is then used to implement greenway management programs or acquire additional greenway land.

Reservation of Land: This type of mechanism does not involve any transfer of property rights but simply constitutes an obligation to keep property free from development for a stated period of time. Reservations are normally subject to a specified period of time, such as 6 or 12 months. At the end of this period, if an agreement has not already been reached to transfer certain property rights, the reservation expires.

Buffer / Transition Zones: This mechanism recognizes the problem of reconciling different, potentially incompatible land uses by preserving greenways that function as buffers or transition zones. Care must be taken to ensure that the use of this mechanism is reasonable and will not destroy the value of a property.

Subdivision Exactions: An exaction is a condition of development approval that requires development to provide or contribute to the financing of public facilities at their own expense. For example, a developer may be required to build a greenway on-site as a condition of developing a certain number of units because the development will create the need for new parks or will harm existing parks due to overuse. This mechanism can be used to protect or preserve greenway lands, which are then donated to either a Town or Johnston County. Consideration should be given to include greenway development in future extraction programs.

Acquisition

Acquisition requires land to be donated or purchased by a government body, public agency, greenway manager, or qualified conservation organization.

Donation or Tax Incentives: In this type of acquisition, a government body, public agency, or qualified conservation organization agrees to receive the full title or a conservation easement to a parcel of land at no cost or at a "bargain sale" rate. The donor is then eligible to receive a federal tax deduction of up to 30 to 50 percent of their adjusted gross income. Additionally, North Carolina offers a tax credit of up to 25 percent of the property's fair market value (up to $5000). Any portion of the fair market value not used for tax credits may be deducted as a charitable contribution. Also, property owners may be able to avoid any inheritance taxes, capital gains taxes, and recurring property taxes.

Fee Simple Purchase: This is a common method of acquisition where a local government agency or private greenway manager purchases property outright, Fee simple ownership conveys full title to the land and the entire "bundle" of property rights including the right to possess land, to exclude others, to use land, and to alienate or sell land.

Easement Purchase: This type of acquisition is the fee simple purchase of an easement. Full title to the land is not purchased, only those rights granted in the easement agreement. Therefore the easement purchase price is less that the full title value.

Purchase / Lease Back: A local government agency or private greenway organization can purchase a piece of land and then lease it back to the seller for a specified period of time. This lease may contain restrictions regarding the development and use of the property.

Bargain Sale: A property owner can sell property at a price less than the appraised fair market value of the land. Sometimes the seller can derive the same benefits as if the property were donated. Bargain Sale is attractive to sellers when the seller wants cash for the property, the seller paid a low cash price and thus is not liable for high capital gains tax, and/or the seller has a fairly high current income and could benefit from the donation of the property as an income tax deduction.

Overlay Zones: An overlay zone and its regulations are established in addition to the zoning classification and regulations already in place.

Option / First Right of Refusal: A local government agency or private organization establishes an agreement with a public agency or private property owner to provide the right of first refusal on a parcel of land that is scheduled to be sold. This form of agreement can be used in conjunction with other techniques, such as an easement to protect the land in the short-term. An option would provide the agency with sufficient time to obtain capital to purchase the property or successfully negotiate some other means of conserving the greenway resource.

Purchase of Development Rights: A voluntary purchase of development rights involves purchasing the development rights from a private property owner at a fair market value. The landowner retains all ownership rights under current use, but exchanges the rights to develop the property for cash payment.

Condemnation: The practice of condemning private land for use as a greenway is viewed as a last resort policy. Using condemnation to acquire property or property rights can be avoided if private and public support for the greenway program is present. Condemnation is seldom used for the purpose of dealing with an unwilling property owner. In most cases, condemnation has been exercised when there has been an absentee property ownership, when the title of the property is not clear, or when it becomes apparent that obtaining the consent for purchase would be difficult because there are numerous heirs located in other parts of the United States or different countries.

Eminent Domain: The right of exercising eminent domain should be done so with caution by the community and only if the following conditions exist: 1) the property is valued by the community as an environmentally sensitive parcel of land, significant natural resource, or critical parcel of land, and as such has been defined by the community as irreplaceable property; 2) written scientific justification for the community's claim about the property's value has been prepared and offered to the property owner; 3) all efforts to negotiate with the property owner for the management, regulation, and acquisition of the property have been exhausted and that the property owner has been given reasonable and fair offers of compensation and has rejected all offers; and 4) due to the ownership of the property, the timeframe for negotiating the acquisition of the property will be unreasonable, and in the interest of pursuing a cost effective method for acquiring the property, the community has deemed it necessary to exercise eminent domain.

## 5.3 Greenway Facility Safety and Security

Safety is a duty and obligation of all public facility managers. Therefore, as the construction documents for the Mountains-To-Sea Trail are completed, appropriate local, state, and federal agencies should review these plans and specifications to ensure that they meet all existing regulations.

In order to provide reasonable and ordinary safety measures, the Towns and municipalities impacted by the Mountains-To-Sea Trail should develop a cohesive coalition and implement a Safety and Security Program. This program should consist of well-defined safety and security policies; the identification of trail management, law enforcement, emergency and fire protection policies; and a system that offers timely response to the public for issues or problems related to safety and security. The coalition of governments will need to implement internal coordination for safety and security between Parks and Recreation, Police, Fire, Public Works, and Legal Departments. Additionally, procedures and policies should be established for external coordination between the Towns, Johnston County and local alliances, local neighborhood watch associations, and "Adopt-a-Greenway" organizations. Important components of the Safety and Security Program should include:

1) Establishment of a Safety Committee or Coordinator
2) Preparation of a Trail Safety Manual for employees and agencies
3) Establishment of User Rules and Regulations
4) Development of Greenway and Trails Emergency Procedures
5) Preparation of a Safety Checklist for the trail
6) Preparation of a trail user response form
7) A system for accident reporting and analysis
8) Regular Maintenance and Inspection Program
9) Site and Facility Development and Review
10) Public Information Program
11) Employee Training Program for Safety and Emergency Response
12) Ongoing Research and Evaluation of Program Objectives

The program should always discourage the general public from using any segment of the Mountains-To-Sea Trail that is under construction. Trail segments should not be considered officially opened for public use until a formal dedication ceremony and authorized agents of the Towns and/or County have completed an official opening. Individuals who use greenway segments that are under construction, without written permission from an authorized agent, should be deemed in violation of the Mountains-To-Sea Trail Hours of Operation policy.

**Hours of Operation**

The consultant recommends that the Mountains-To-Sea Trail be operated like all other non-lighted public parks and recreation facilities open for public use from dawn to dusk, 365 days a year, except as specifically designated by the local Parks and Recreation Departments. The consultant recommends that individuals who are found using these facilities after dusk and before dawn, be deemed in violation of these hours of operation and subject to fines and/or prosecution.

**Trail User Rules and Regulations**

One of the emerging safety issues in greenway trail planning, design, and development is multi-user conflict. Typically, these conflicts are caused by overuse of a trail. However, other factors may be lead to user conflicts and problems including poorly designed and engineered trail alignments, inappropriate user behavior, or inadequate facility capacity. The most effective trail use management plan is a well-conceived safety program that provides the individual user with a Code of Conduct for the trail, sometimes called a Trail Ordinance. Several multi-use trail systems across the United States have adopted progressive ordinances for public use. The consultant recommends that the following Rules and Regulations be implemented for the Mountains-To-Sea Trail. These rules should be displayed in both brochures and on information signs throughout the Trail. The consultant recommends that these rules and regulations be reviewed by the appropriate authorities and legally adopted by the Towns and Johnston County.

1) **Be Courteous:** All Trail users, including bicyclists, joggers, walkers, wheelchairs, skateboarders and skaters, should be respectful of other users regardless of their mode of travel, speed, or level of skill. Never spook animals; like horses and dogs - talk to them in a calm voice as you approach. Respect the privacy of adjacent landowners.

*2)* **Keep Right:** Always stay to the right as you use the Trail, or stay in the lane that has been designated for your user group. The exception to this rule occurs when you need to pass another user.

3) **Pass on the Left:** Pass others going in your direction on their left. Look ahead and behind to make sure that your lane is clear before you pull out an around the other user. Pass with ample separation. Do not move back to the right until you have safely gained distance and speed on the other user. Faster traffic should always yield to slower and oncoming traffic.

4) **Give Audible Signal When Passing:** All users should give a clear warning signal before passing. This signal may be produced by voice, bell, or soft horn. Voice signals might include “Passing on the Left!” or “Cyclist on the left!” Always be courteous when providing the audible signal - profanity is unacceptable.

5) **Be Predictable:** Travel in a consistent and predictable manner. Always look behind before changing position on the Trail, regardless of your mode of travel.

6) **Control Your Bicycle:** Inattention, even for a second can cause disaster —always stay alert! Maintain a safe and legal speed at all times.

7) **Don’t Block the Trail:** When in a group, including your pets, use no more than half the trailway, so as not to block the flow of other users. If users approach your group from both directions, form a single line, or stop and move to the far right edge of the Trail to allow safe passage by these users.

8) **Yield when entering or Crossing Trails:** When entering or crossing a Trail at uncontrolled intersections, yield to traffic already using the other trail.

9) **The Use of Lights:** When using a Trail during periods of low visibility each cyclist should be equipped with proper lights. Cyclists should have a white light that is visible from five hundred feet to the front, and a red or amber light that is visible from five hundred feet to the rear. Other Trail users should use white lights (bright flashlights) visible two hundred fifty feet to the front, and wear light or reflective clothing.

10) **Don't Use this Trail Under the Influence of Alcohol or Drugs:** It is illegal to use this Trail if you have consumed alcohol in excess of the statutory limits, or if you have consumed illegal drugs. Persons who use a prescribed medication should check with their doctor or pharmacist to ensure that it will not impair their ability to safely operate a bicycle or other wheeled vehicle.

11) **Cleanup Your Litter:** Please keep this Trail clean and neat for other users to enjoy. Do not leave glass, paper, cans, or other debris on or near the trail. Please clean up after your pets. Pack out what you bring in —and remember to always recycle your trash.

12) **Keep Pets on Leashes:** All pets must be kept on a secure and tethered leash. Failure to do so will result in fines and possible detention of the pet.

13) **Use the Buddy System:** Use the Trail system with a friend!

14) **Trail Subject to Flash Flooding:** Please be aware that the Mountains-To-Sea Trail is officially closed during times when floodwaters overflow the creek banks and cover the Trail surface. For your personal safety, please be prepared to leave the Trail immediately during periods of heavy rainfall.

15) **Swimming Prohibited:** Swimming is prohibited in creeks and tributary streams.

16) **Vegetation Removal:** It is illegal to remove vegetation of any type, size, or species from the Trail. Please contact the appropriate Parks and Recreation Department or Planning Department should you have concerns about noxious weeds, poisonous vegetation, dying or dead vegetation, or other concerns about vegetation growth in the greenway.

17) **Share the Trail!** Always exercise due care and caution when using the Trail!

**Police/Park Ranger Patrol and Emergency Response System**

In order to provide effective patrol and emergency response to the needs of trail users and adjacent property owners, the consultant recommends that the various cities and county Police and Sheriff Departments and Parks and Recreation Departments work together, to develop a specific patrol and emergency response plan for the Mountains-To-Sea Trail. This plan should define a cooperative law enforcement strategy for the trail based on the capabilities of different agencies and services typically required for the facility. There will be numerous phases of the trail until

completion, each consultant as they are hired for each phase should be required to work with the designated departments/agencies to deliver a site plan that illustrates: points of access to the trail; approved design details for making these access points safe, secure, and accessible to law enforcement officials; and potential locations for a system of cellular-type emergency phones. The consultant will also work with appropriate officials to locate other mechanisms or project elements that will aid local agencies in managing the trail in a safe and secure manner.

The Police, Sheriffs, Parks, and Recreation Departments should also define an emergency response system in conjunction with appropriate local Fire Stations and Paramedical units that defines which agencies should respond to 911 calls, and provides easy-to-understand routing plans and access points for emergency vehicles. Local hospitals should be notified of these routes so that they may also be familiar with the size and scope of the project. The entire Trail system will be designed and developed to support a minimum gross vehicle weight of 6.5 tons to allow emergency vehicle access.

At all public entrances to the Mountains-To-Sea Trail, appropriate signage should be installed to notify Trail users of the potential for flash flooding and the need to quickly exit the trail during periods of heavy rainfall.

**Risk Management and Liability**

The design, development, management, and operation of the Mountains-To-Sea Trail must be carefully and accurately executed in order to provide a resource that protects the health, welfare, and safety of the public.

Liability most often occurs when a facility has been under-designed for the intended volume of use; when management of the facility is poor; or when unexpected accidents occur because the trail manager failed to recognize the possibilities of a potentially hazardous situation. To reduce the exposure to liability, Towns and County should have in place the following measures prior to opening the first phase of the trail:

1) A complete maintenance program that provides the appropriate duty or level of care to trail users;
2) A risk management plan that appropriately covers all aspects of the trail
3) A comprehensive working knowledge of public use laws and recent case history applicable in North Carolina

Public use of the Mountains-To-Sea Trail should be covered under existing municipal policies for the use of parkland and public spaces. The Towns and County should exercise reasonable care in the construction of all trail facilities to reduce hazardous, public nuisance and life threatening situations. The Mountains-To-Sea Trail is available for public use as defined by the Hours of Operation Policy; therefore, any individual found using the Trail outside the normal hours of operation would not be covered by the municipal insurance policies for public use.

The Towns and County should exercise reasonable care in the design and construction of all Trail facilities to reduce hazardous, public, nuisance and life threatening situations. The Trail should become available for public use as defined under the Hours of Operation Policy; any individual found using the Trail outside the normal hours of operation should be treated as a trespasser.

**Studies of Trail Liability**

A study by the Rails to Trails Conservancy (RTC) provides a primer on trail-related liability issues and risk management techniques. Below is a section of the report that addresses concerns in the proposed Haw River Greenway corridor. The report was written by Hugh Morris of RTC in cooperation with the National Park Service: Rivers, Trails, and Conservation Assistance Program.

*Concerns and Solutions*

There are two primary categories of people who might be concerned about liability issues presented by a trail: the trail managing and owning entity (typically a public entity) and private landowners. Private landowners can be divided into two categories, those who have provided an easement for a trail over their land and those who own land adjacent to a trail corridor.

Similarly, there may be a pre-existing corridor traversing or lying adjacent to their property such as a former rail corridor that has been converted to a trail. In either situation, private landowners may have some concerns about the liability should a trail user stray onto their land and become injured. In the first instance, where an easement is granted, the concern may be over injuries on both the granted right-of-way as well as injuries that may occur on land under their control that is adjacent to the trail. Under the latter condition, where the landowner has no ownership interest in the trial, the landowner will only be concerned with injury to trail users wandering onto their property and getting hurt or perhaps a tree from their property falling onto the trail.

In general, people owning land adjacent to a trail -- whether the trail is an easement granted by them or is held by separate title -- foresee that people using the trail may be endangered by a condition on their land. Potential hazards such as a pond, a ditch, or a dead tree may cause the landowner to worry about liability for a resulting injury. The landowners may reduce their liability by taking the following actions (BCEMC 1997, p. 58):

1) Work with trail designers to have the trail located away from hazards that cannot be corrected
2) Make it clear that trail users are not invited onto the adjoining land. This can be aided by having the trail designer develop signs, vegetative screening, or fencing.
3) If a hazardous condition does exist near the trail, signs should be developed to warn trail users of the hazard if it cannot be mitigated.

Of particular concern to adjacent landowners are attractions to children that may be dangerous, such as a pond. Many states recognize that children may trespass to explore an attractive nuisance. These states require a legal responsibility to children, even as trespassers, that is greater than the duty of care owed to adults (BCEMC 1997, p.58).

If a landowner provides an easement for a public-use-trail, the easement contract should specify that the managing agency will carry liability insurance, will design the trail to recognized standards and will develop and carry out a maintenance plan. The landowner may also request that an indemnification agreement be created in their favor.

Abutting property owners frequently express concerns about their liability to trail users. In general, their liability, if any, is limited and is defined by their own actions in relation to the trail. If an abutting property owner possesses no interest in the trail, then he or she does not have any right or obligation to warn trail users about defects in the trail unless the landowner creates a dangerous condition on the trail by his own act or omission. In that event, the abutting landowner would be responsible for his own acts or omissions that caused the injury to a third party using the trail, just as the operator of one car is responsible to the operator of another for an accident he caused on a city street (Montange 1989, p. 127).

*Forms of Protection*

There are three legal precepts, either alone or in combination that define and in many cases limit liability for injury resulting from trail use. The first is the concept of duty of care, which speaks to the responsibility that a landowner (private or public) has to anyone on his or her land. Second is the Recreational Use Statute (RUS), which is available in all 50 states and provides protection to private landowners and some public landowners who allow public free access to land for recreational purposes. For those public entities not covered by a RUS, states tend to have a tort claims act, which defines and limits governmental liability. Third, for all private and public parties, liability insurance provides the final line of defense. Trail owners can also find much protection through risk management.

*Duty of Care*

Tort law, with regard to finding fault for an incident that occurs in a particular location is concerned with the "class" of person who incurs the injury, and the legal duty of care that a landowner owes a member of the general public varies from state to state but is generally divided into four categories. In most states, a landowner's responsibility for injuries depends on the status of the injured person. A landowner owes increasingly greater duties of care (i.e.; is more at risk) if the injured person is a "trespasser", a "licensee", an "invitee", or a "child".

Trespasser -- a person on land without the landowner's permission, whether intentionally or by mistaken belief that they are on public land. Trespassers are due the least duty of care and therefore pose the lowest level of liability risk. The

landowner is generally not responsible for unsafe conditions. The landowner can only be held liable for deliberate or reckless misconduct, such as putting up a trip wire. Adjacent landowners are unlikely to be held liable for injuries sustained by trespassers on their property.

Licensee -- a person on land with the owner's permission but only for the visitor's benefit. This situation creates a slightly higher liability for the landowner. For example, a person who is permitted to hunt on a farm without paying a fee, if there were no RUS, would be classified as a licensee. If the landowner charged a fee, the hunter would probably be classified as an invitee. Again, the landowner is not responsible for discovering unsafe conditions; however, the landowner must provide warning of the known unsafe conditions.

Invitee -- a person on the owner's land with the owner's permission, expressly or implied, for the owner's benefit, such as a paying customer. This is the highest level of responsibility and therefore carries the highest level of liability. The owner is responsible for unknown dangers that should have been discovered. Put in a different way, the landowner has a duty to:

1) Inspect the property and facilities to discover hidden dangers;
2) Remove the hidden dangers or warn the user of their presence;
3) Keep the property and facilities in reasonably safe repair: and
4) Anticipate foreseeable activities by users and take precautions to protect users from foreseeable dangers.

The landowner does not insure the invitee's safety, but must exercise reasonable care to prevent injury. Generally, the landowner is not liable for injuries caused by known, open, or obvious dangers where there has been an appropriate warning. For example, customers using an ice rink open to the public for a fee would be invitees.

Child -- even if trespassing, some states accord children a higher level of protection. The concept of "attractive nuisance" is particularly relevant to children. Landforms such as ponds can be attractive to children who, unaware of potential danger, may be injured if they explore such items.

Prior to the widespread adoption of RUS' by the states (see discussion below), this classification system defined the liability of adjacent landowners. Even now, trail managers or private landowners who charge a fee are at greater risk of liability because they owe the payee a greater responsibility to provide a safe experience.

Thus, where no RUS exists or is unavailable, trail users would be of the licensee class, provided the trail manager does not charge an access fee. If a trail manager charges a fee, the facility provider tends to owe a greater duty of care to the user and thus has a greater risk of liability if a trail user is injured due to a condition of the trail.

**Recreational Use Statutes (RUS)**

The Council of State Governments produced a model recreational use statute (RUS) in 1965 in an effort to encourage private landowners to open their land for public recreational use by limiting the landowner's liability for recreational injuries when access was provided without charge (Kozlowski, p. V1D1).

Recreational use statutes are now on the books in all 50 states. These state laws provide protection to landowners who allow the public to use their land for recreational purposes. The theory behind these statutes is that if landowners are protected from liability they would be more likely to open up their land for public recreational use and that, in turn, would reduce state expenditures to provide such areas. To recover damages, an injured person must prove "willful and wanton misconduct" on the part of the landowner, essentially the same duty of care owned to a trespasser. However, if the landowner is charging a fee for access to the property, the protection offered by the recreational use statue is lost in most states.

The preamble of the model RUS is clear that it was designed for private landowners but the actual language of the model legislation does not differentiate between private and public landowners. The result is that while some states have followed the intent of the model statute and limited the immunity to private landowners, other states have extended the immunity either to cover public landowners legislatively or judicially (Goldstein 1997, p. 788).

Under the Federal Tort Claims Act, the federal government is liable for negligence like a private landowner under the law of the state. As a result, RUS's intended for private individuals have been held applicable to the federal government where it has opened land up for public recreation (Kozlowski, p. V1D1).

Under lease arrangements between a public agency and a private landowner, land can be provided for public recreation while the public agency agrees to defend and protect the private landowner. The private landowner may still be sued but the public agency holds the landowner harmless, taking responsibilities for the cost of defending a lawsuit and any resulting judgments (Kozlowski, p. V1D2).

While state RUS's and the court interpretations of these laws vary somewhat, a few common themes can be found. The statues were created to encourage landowners to make their land available for public recreation purposes by limiting their liability provided they do not charge a fee. The RUS limits the duty of care a landowner would otherwise owe to a recreational licensee to keep his or her premises safe for use. It also limits a landowner's duty to warn of dangerous conditions provided such failure to warn is not considered grossly negligent, willful, wanton, or reckless. The result of many of these statues is to limit landowner liability for injuries experienced by people partaking in recreational activities on their land. The existence of a RUS may also have the effect of reducing insurance premiums for landowners whose lands are used for recreation (BCEMC 1997, p. 58).

These laws do not prevent somebody from suing a trail manager/owner or a private property owner who has made his or her land available to the public for recreational use, it only means the suit will not advance in court if certain conditions hold true. Thus, the trail manager/owner may incur costs to defend himself of herself. Such costs are the principal reason for purchasing liability insurance.

**Risk Management**

All of the above-mentioned forms of protection aside, perhaps the best defense a trail manager has are sound policy and practice for trail maintenance and usage. Developing a comprehensive technique is the best defense against an injury-related lawsuit (BCEMC 1997, p. 60).

Trails that are properly designed and maintained go a long way to ward off any potential liability. There are some general design guidelines (AASHTO and MUTCD) that, if adhered to, can provide protection by showing that conventional standards were used in designing and building the trail. Trails that are designed in accordance with recognized standards or "best practices" may be able to take advantage of any design immunities under state law. Within the spectrum of public facilities, trails are quite safe, often less risky than roads, swimming pools and playgrounds.

The managing agency should also develop a comprehensive maintenance plan that provides for regular maintenance and inspection. These procedures should be spelled out in detail in a trail management handbook and a record should be kept of each inspection including what was discovered and any corrective action taken. The trail manager should attempt to ward off or eliminate any hazardous situations before an injury occurs. Private landowners that provide public easements for a trail should ensure that such management plans are in place and used to reduce their own liability. Key points include (BCEMC 1997, p. 57); (LTA 1991, p. 8).

*During trail design and development:*

- Develop an inventory of potential hazards along the corridor
- Create a list of users that will be permitted on the trail and the risks associated with each
- Identify all applicable laws
- Design and location of the trail such that obvious dangers are avoided. Warnings of potential hazards should be provided, and mitigated to the extent possible
- Trail design and construction should be completed by persons who are knowledgeable about design guidelines, such as those listed in AASHTO and MUTCD documents
- Trail regulations should be posted and enforced.

*Once the trail is open for use:*

- Regular inspections of the trail by a qualified person who has the expertise to identify hazardous conditions and maintenance problems.
- Maintenance problems should be corrected quickly and documented. Where a problem cannot be promptly corrected, warnings to trail users should be erected.

- Procedures for handling medical emergencies should be developed. The procedures should be documented as well as any occurrence of medical emergencies.
- Records should be maintained of all inspections, what was found, and what was done about it. Photographs of found hazardous conditions can be useful.

These risk management techniques will not only help to ensure that hazardous conditions are identified and corrected in a timely manner, thereby averting injury to trail users, but will also serve to protect the trail owner and managing agency from liability. Showing that the agency had been acting in a responsible manner can serve as an excellent defense in the event that a lawsuit develops (BCEMC 1997, p. 58).

**Managing Special Situations**

The following are circumstances that the Rails-to-Trails Conservancy has heard about through numerous conversations with local trail advocates who have expressed concern about situations that might present themselves. For the most part, these situations can be addressed through management techniques.

**Hunting adjacent to Trails**

Some trails traverse public and/or private land that may at certain periods permit hunting. Such proximity can expose trail users to potential injury. Like pesticide use, hunting tends to take place at limited times during the year. Thus a similar mitigation technique can be used: post signs at the trail heads when hunting season is open. While the landowner may technically be liable for such an incident because it is generally unlawful to conduct a hazardous activity that can migrate into adjacent property, simple warnings to trail users can provide trail mangers with notification of when such activity will occur. Trails can also be closed during specific times of the year to allow hunting to take place unabated.

**Use of Volunteers for Trail Work**

Trail mangers often use volunteers for routine trail maintenance or even for trail construction. What happens if the volunteer is injured while performing trial-related work? What happens if an action taken by a volunteer leads to an injury of a trail user? First, make sure your insurance covers volunteer workers. Second, the trail manager should be protected from any user injury created by an act of a volunteer provided the act is not one of willful or reckless misconduct. The Federal Volunteer Protection Act of 1997 protects the volunteer worker. This act protects volunteers of nonprofit organizations or governmental entities. The Act states that such volunteers are not liable for harm caused by their acts of commission or omission provided the acts are in good faith.

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## 5.4 Segment Cut Sheets and Cost Estimates

Some of the recommended trails from Chapter 4 are broken down into twenty project ‘cut sheets’ on the following pages. The trails selected for the cut sheets represent the MST mainline along the Neuse River, with two trails connecting to Clayton and Smithfield (Sam’s Branch Greenway and Buffalo Creek Greenway, respectively). In addition to the trail routing, the cut sheets also contain the following elements:

- A 150’ Buffer For Trail Routing
- The Neuse River
- Tributaries
- 10’ Contours
- The Nuese River Floodway
- The 100 Year Floodplain
- Marsh (from Johnston County Land Cover GIS Data)
- Stream Crossing Points along Nuese for the MST
- Parcels and North Carolina Parcel Pin Numbers
- Zoning and Land Use Information

The zoning code labels shown on the cut sheets (for example, PUD, AR, etc.) are each defined in the tables on pages 71-72.

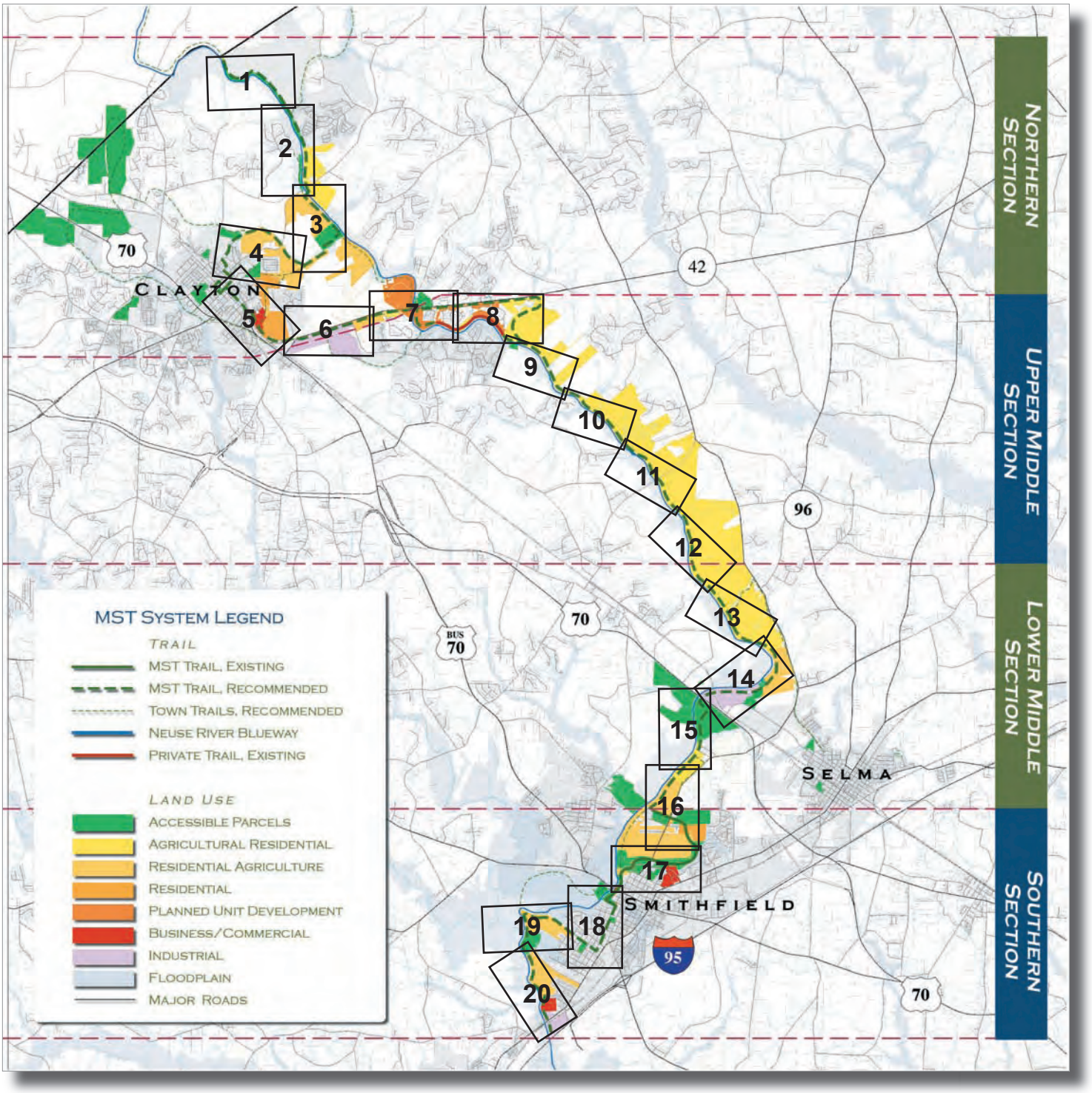
A cost estimate table is provided for each segment. The costs that are outlined include the following categories: demolition, off-road facilities, on-road facilities, utilities, signage, and site amenities. Estimates were gathered from many sources, including recent trail-building efforts, local sales representatives, and review by NCDOT engineers. A summary of the estimates is provided on pages 38-39.

These cut sheets can be used as an implementation tool for Johnston County, the Town of Clayton, and the Town of Smithfield to identify portions of the trail that they feel are buildable and manageable, segment by segment. The cost of land was not included in these estimates since there are many alternatives to buying the land outright (as discussed earlier in this chapter), any of which would off-set a land price estimate by widely varying degrees. However, the average cost of land required for each segment can be determined by using the average cost of land in Johnston County ($12,000 per acre in 2006; see page 39).

| Zoning Codes | Definitions |
|---|---|
| **Johnston County** | |
| AR | Agricultural and Residential. This includes houses, churches, etc. With a special use permit, uses can include kennels, day cares, community centers, etc. |
| RR | Resort/Residential. Campgrounds, stables, marinas, etc. |
| R-MHP | Residential-Mobile Home Parks. |
| OI | Office and Institutional. Hospitals, doctor's offices, banks, libraries, etc. |
| GB | General Business. Hotels, gas stations, lumber yards, auto repair, restaurants, etc. |
| CB | Community Business. Churches, restaurants, day care, convenience stores, etc. |
| I-1 | Light Industrial. Boat sales, cabinet shops, lumber yards, electronics manufacturing, pharmeceutical manufacturing, industrial supply sales and service, etc. |
| I-2 | Heavy Industrial. Auto repair garages, junk yards, sawmills, concrete plants, milling operations, etc. |
| PUD | Planned Unit Development. Comprehensively planned communities where some light business is to be expected as part of the development. |
| IHI | Interstate Highway Interchange. Uses commonly found at the interchange of interstates. These include restaurants, gas stations, grocery stores, hotels, offices, etc. |
| AR/R-40 | Residential and Agricultural. Utilize well and septic systems. Includes churches, home businesses, etc. Minimum lot size is 40,000 sq ft. |
| R-30 | Single family residential utilizing some form of public water. Minimum lot size is 30,000 sq ft. |
| R-20 | Single family residential utilizing some form of public water. Minimum lot size is 20,000 sq ft. |
| R-10 | Single and multifamily residential, utilizing public water and sewer. Density max 4 per acre. Minimum lot size is 10,000 sq ft. |
| R&R | Resort/Residential. Campgrounds, stables, marinas, etc. |
| O&I | Office and Institutional. Hospitals, doctor's offices, banks, libraries, etc. |
| HB-4 | Highway Business. Gas Stations, car lots, restaurants, etc. |
| SC-3 | Shopping Center. |
| CB-2 | Community Business. New and used auto parts, day care, industrial equipment sales, etc. |
| GB-1 | General Business. Bascially any business, excluding industrial uses. |
| I-1 | Light Industrial. Boat sales, cabinet shops, lumber yards, electronics manufacturing, pharmeceutical manufacturing, industrial supply sales and service, etc. |
| I-2 | Heavy Industrial. Auto repair garages, junk yards, sawmills, concrete plants, milling operations, etc. |
| CLD | County Landfill. |
| IHD | Interstate Highway. Uses commonly found at the interchange of interstates. Restaurants, gas stations, grocery stores, hotels, offices, etc. |
| MHPD | Mobile Home Park district. Mobile Home parks. |

| Town of Clayton | |
|---|---|
| AR/R-40/20 | Residential District. Principal use is for large lot single family residential development and for agricultural purposes. |
| R-10 | Residential District. Principal use of land is for single family dwellings with adequate lot areas and multi-family dwellings on larger lots to ensure adequate open space. |
| R-8 | Principal use of for single family residences with adequate lot areas to ensure relatively low density development in the district. |
| R-6 | Residential District. Principal use of the land is for single family and multi-family residences in relatively high density neighborhoods. |
| O-I | Office and Institutional District. Established primarily for the development of offices and institutions which have similar development characteristics and require locations close to the more intensive commercial districts. |
| B-1 | Central Business District. Permits concentrated development of permitted uses within the existing central business area of town. |
| B-2 | Neighborhood Business District. Principal use of land is to provide for the retailing of goods and services to the adjacent residential neighborhood. |
| B-3 | Highway Business District: Established for the development of offices, service uses, and business retailing durable and convenience goods for the community as a whole. These districts shall be restricted to areas located on major radial highways. |
| I-1 | Industrial District. Principal use of land is for industries which can be operated in a relatively clean and quiet manner and which will not be obnoxious to nearby residential or business districts, warehousing and wholesaling activities, and research facilities. Regulations are intended to prohibit the use of land for industries that by their nature, may create some nuisance to surrounding properties. |
| I-2 | Industrial District. Primary use of land is for heavy industries that by their nature may create some nuisance and which are not properly associated with nor compatible with residential, commercial, and service establishments. |
| MU-PD | Mixed Use Planned Development District. This includes some commercial uses, residential uses, and other uses within the same parcel of land. |
| **Town of Smithfield** | |
| R-20A | Residential-Agricultural. Provides for areas where the principal use of land is for low density residential and agricultural purposes. |
| R-10 | Single Family Residential. Provides areas for conventional single-family neighborhoods. |
| R-8 | Single, Two, and Multi-Family Residential. Provides areas where a mixture of housing types are allowed, some as permitted and others as conditional or special uses, with proper review, site planning, and designed controls. Planned unit developments are allowed in R-8 districts. |
| R-6 | High Density Single, Two, and Multi-family Residential. Provides for older areas which have developed with a mixture of housing types at fairly high densities. Except in unusual circumstances, it will not be used in new areas, and additional property will not be considered for rezoning to this district. |
| R-MH | Mobile Home, Residential. Provides areas in which the principal uses of land are single-family dwellings, two family dwellings, and mobile homes on individual lots. Multi-family dwellings and mobile home parks are special uses in this district. |
| O&I | Office and Institutional. Provides areas for offices, institutional uses, and uses which are compatible with such uses. |
| B-1 | Central Business. Provides for those uses which can provide and contribute to a strong retail and service core for downtown Smithfield. |
| B-2 | General Business District. Provides for those business areas adjacent to the downtown core as well as other intensive and extensive business areas in Smithfield. |
| B-3 | Highway Entranceway Business. Allows commercial uses with proper regulations and safeguards to promote the safe and efficient movement of traffic, and the orderly development of land along major arteries leading into town, while enhancing and preserving the environmental and aesthetic qualities of these areas. The proper location, and development of the uses along these corridors will contribute to and enhance trade, tourism, captial investment, and general welfare. |
| I | Industrial. Provides areas for those industrial uses which will be compatible with the Smithfield area and will not cause adverse effects for the area or adjacent uses. |

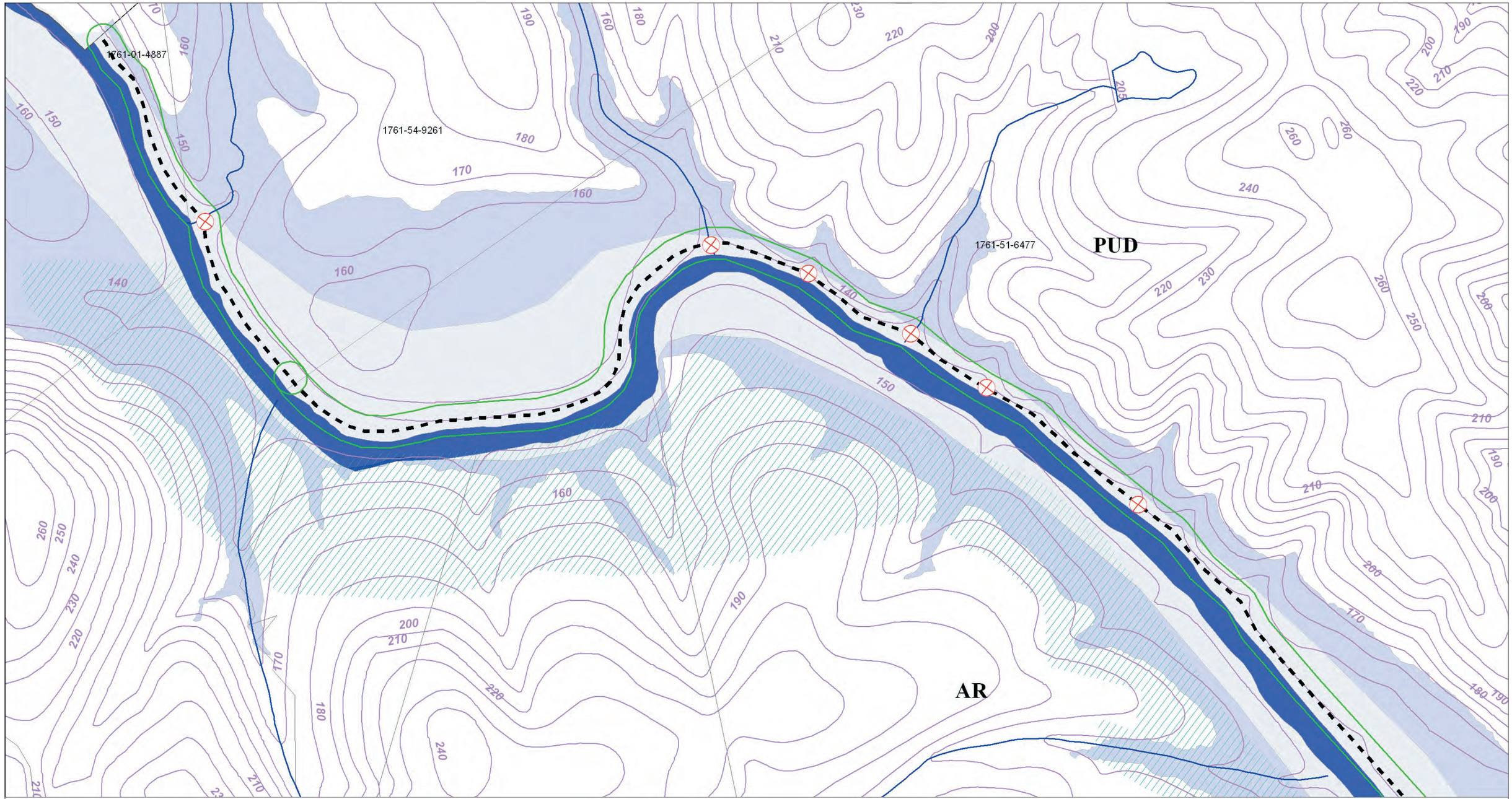
## MST Segment Locator and Land Use Map



| | **Segment 1: 8,360 lf (1.58 miles)** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 167,200 | $0.25 | sf | $41,800.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,508.00 |
| | | | | Demolition Total | **$44,308.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(9,189 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 8,360 | $4.00 | lf | $33,440.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 8,360 | $3.00 | lf | $25,080.00 |
| 3 | 10' wide multi-use asphalt trail | 8,360 | $35.00 | lf | $292,600.00 |
| 4 | 2' wide gravel shoulder (both sides) | 16,720 | $6.00 | lf | $100,320.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (6) | 120 | $550.00 | lf | $66,000.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 16,720 | $0.12 | sf | $2,006.40 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 2 | $2,500.00 | ea | $5,000.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$492,206.40** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$44,308.00** |
| **B** | **Off-Road Facility** | | | | **$519,446.40** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$5,000.00** |
| **E** | **Signage** | | | | **$400.00** |
| **F** | **Site Amenities** | | | | **$800.00** |
| | **SUBTOTAL** | | | | **$569,954.40** |
| | **Contingency** | | | 15% | **$85,493.16** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$655,447.56** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# NORTHERN SECTION: SEGMENT 1

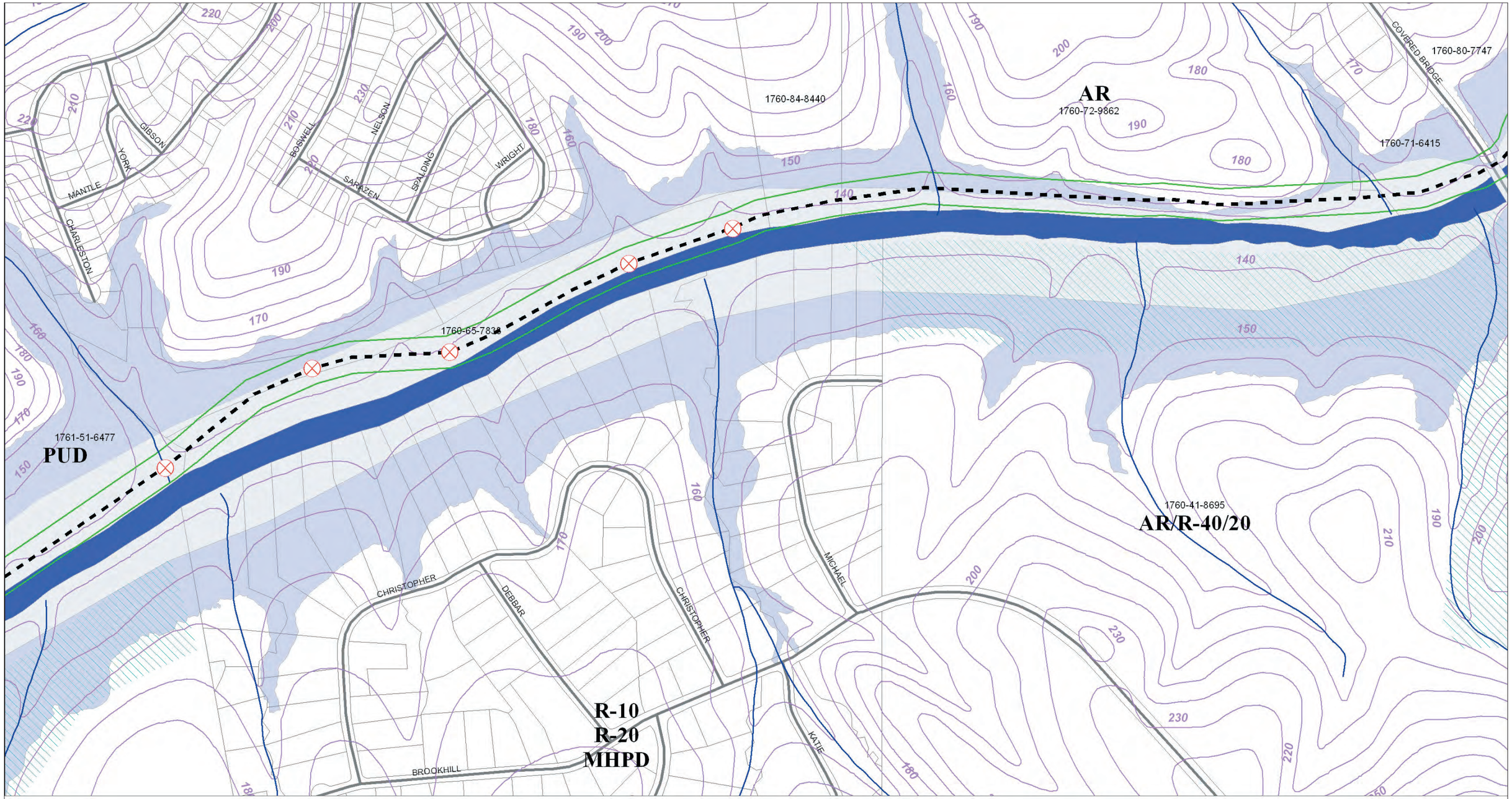




| | | | | | |
|---|---|---|---|---|---|
| | **Segment 2: 7,350 lf (1.39 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide)* | 78,600 | $0.25 | sf | $19,650.00 |
| | Dumping Fees (6% of Demolition total) | | | | $1,179.00 |
| | | | | Demolition Total | **$20,829.00** |
| | **Existing corridor partially cleared* | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(7,350 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 7,350 | $4.00 | lf | $29,400.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 7,350 | $3.00 | lf | $22,050.00 |
| 3 | 10' wide multi-use asphalt trail | 7,350 | $35.00 | lf | $257,250.00 |
| 4 | 2' wide gravel shoulder (both sides) | 14,700 | $6.00 | lf | $88,200.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (5) | 150 | $550.00 | lf | $82,500.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 14,700 | $0.12 | sf | $1,764.00 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 0 | $2,500.00 | ea | $0.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 1 | $300.00 | ea | $300.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$453,264.00** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$20,829.00** |
| **B** | **Off-Road Facility** | | | | **$481,164.00** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$0.00** |
| **E** | **Signage** | | | | **$700.00** |
| **F** | **Site Amenities** | | | | **$800.00** |
| | **SUBTOTAL** | | | | **$503,493.00** |
| | **Contingency** | | | 15% | **$75,523.95** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$579,016.95** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# NORTHERN SECTION: SEGMENT 2

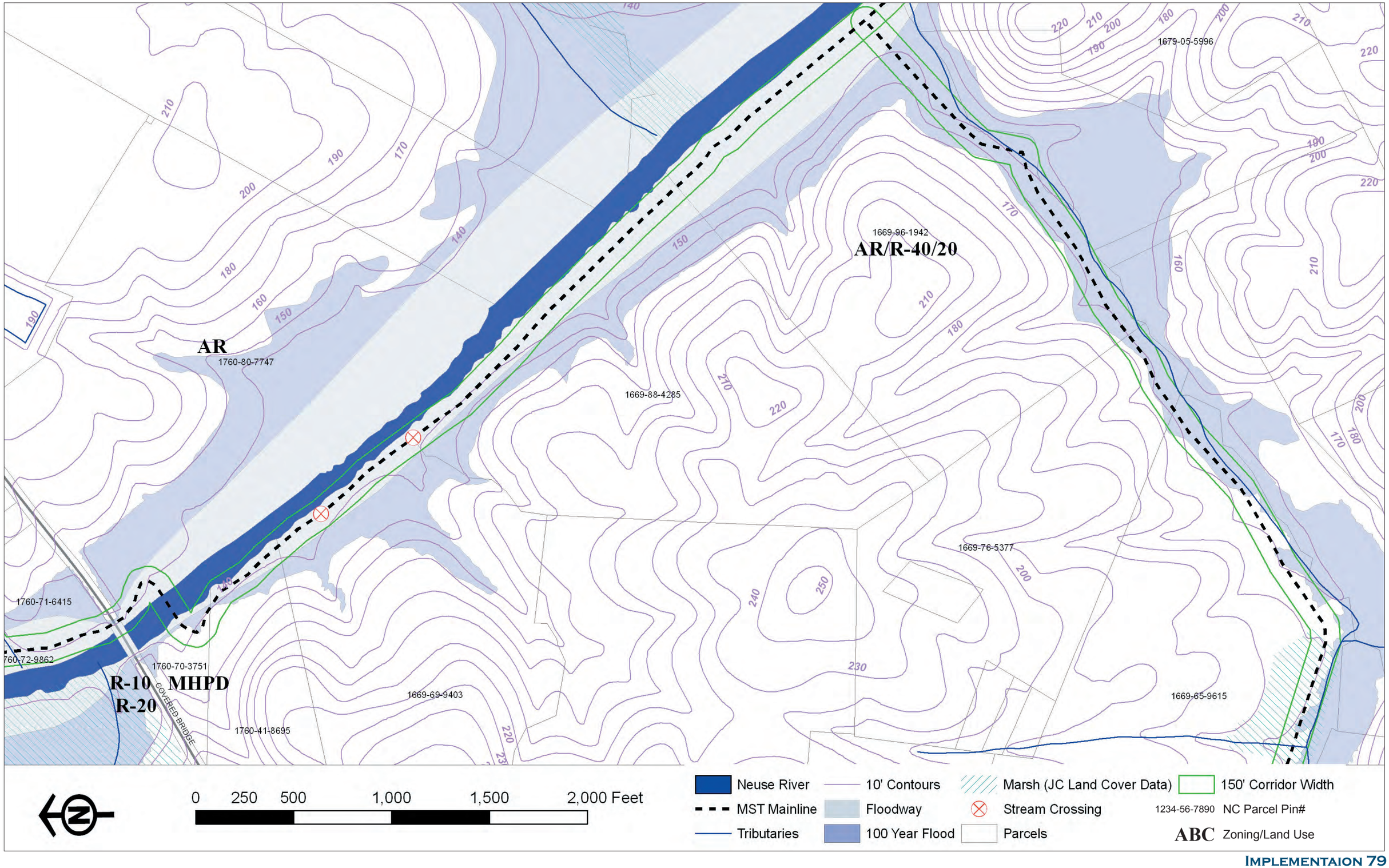




| | **Segment 3: 9,880 lf (1.87 miles)** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| **A** | Clearing and grubbing understory (20' wide)* | 49,400 | $0.25 | sf | $12,350.00 |
| | Dumping Fees (6% of Demolition total) | | | | $741.00 |
| | | | | Demolition Total | **$13,091.00** |
| | **Existing corridor partially cleared* | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| **B** | **Off-Road Facility** *(9,655 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 9,655 | $4.00 | lf | $38,620.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 9,655 | $3.00 | lf | $28,965.00 |
| 3 | 10' wide multi-use asphalt trail | 9,655 | $35.00 | lf | $337,925.00 |
| 4 | 2' wide gravel shoulder (both sides) | 19,310 | $6.00 | lf | $115,860.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (2) | 32 | $550.00 | lf | $17,600.00 |
| 6.1 | Bridge abutments (near Covered Bridge Road) | 1 | $17,273.00 | pair | $17,273.00 |
| 6.2 | Bridge deck (near Covered Bridge Road) | 2,250 | $100.00 | sf | $225,000.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 19,310 | $0.12 | sf | $2,317.20 |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 3 | $5,400.00 | ea | $16,200.00 |
| 2 | Solar powered light pole | 3 | $1,300.00 | ea | $3,900.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.00 |
| 2 | Trail and street regulatory/warning signs | 1 | $200.00 | ea | $200.00 |
| 3 | Directional signs | 2 | $200.00 | ea | $400.00 |
| 4 | Educational signs | 2 | $300.00 | ea | $600.00 |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 3 | $400.00 | ea | $1,200.00 |
| 2 | Bicycle racks (holds 9 bikes) | 1 | $400.00 | ea | $400.00 |
| 3 | Drinking fountains (with pet fountain) | 1 | $2,000.00 | ea | $2,000.00 |
| 4 | Picnic tables/ tables | 3 | $500.00 | ea | $1,500.00 |
| 5 | Trash receptacles (32-gallon, steel) | 1 | $250.00 | ea | $250.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 1 | $50,000.00 | ea | $50,000.00 |
| | | | Site Development Total | | **$774,490.20** |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$13,091.00** |
| **B** | **Off-Road Facility** | | | | **$783,560.20** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$22,600.00** |
| **E** | **Signage** | | | | **$1,600.00** |
| **F** | **Site Amenities** | | | | **$55,350.00** |
| | **SUBTOTAL** | | | | **$876,201.20** |
| | **Contingency** | | | 15% | **$131,430.18** |
| | **SEGMENT TOTAL**** | | | | **$1,007,631.38** |
| | ***Total for this segment includes a bridge over the Neuse River and a major MST trailhead.* | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# NORTHERN SECTION: SEGMENT 3

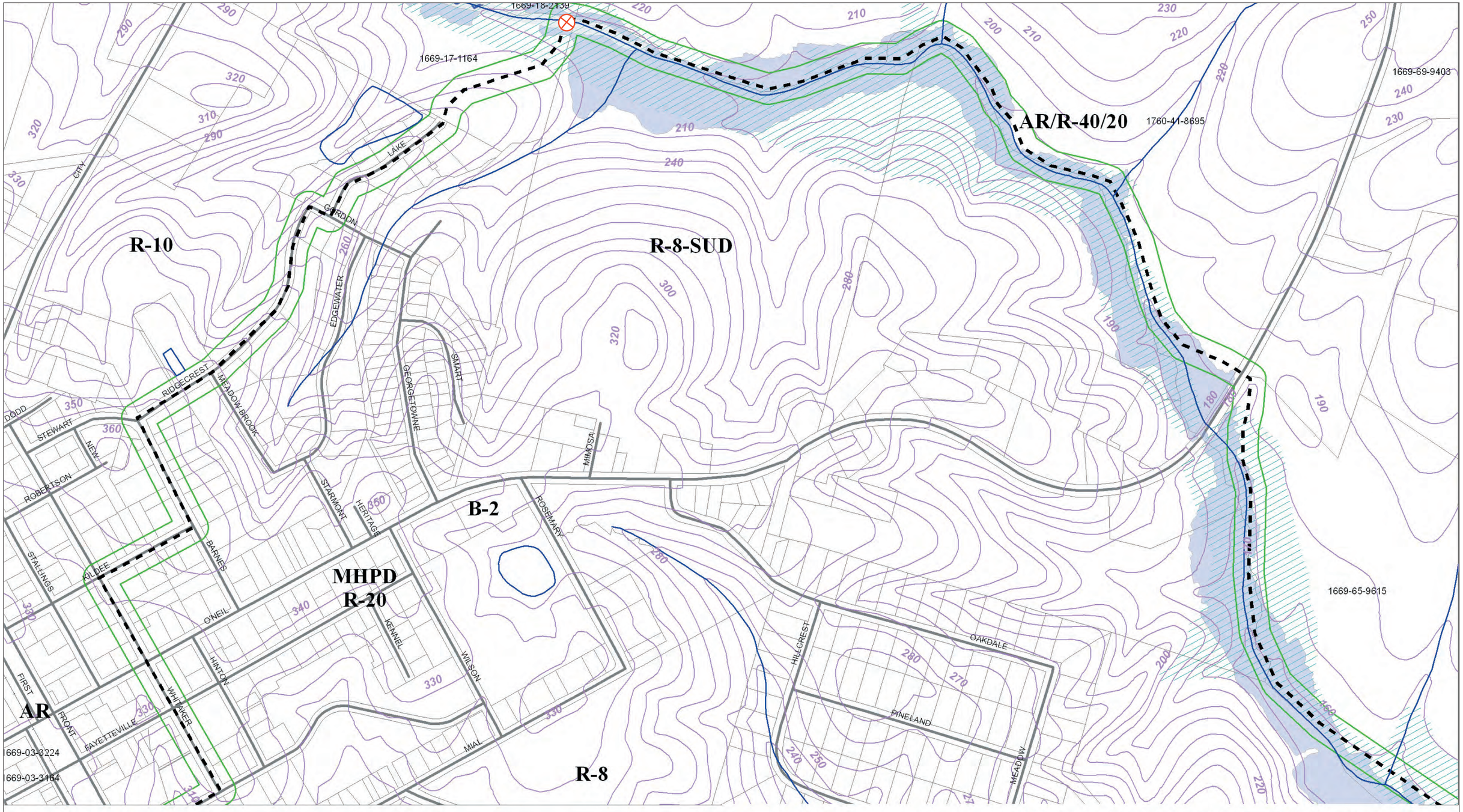




| | | | | | |
|---|---|---|---|---|---|
| | **Segment 4: 11,870 lf (2.25 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 144,800 | $0.25 | sf | $36,200.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,172.00 |
| | | | | Demolition Total | **$38,372.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(7,240 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 7,240 | $4.00 | lf | $28,960.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 7,240 | $3.00 | lf | $21,720.00 |
| 3 | 10' wide multi-use asphalt trail | 7,240 | $35.00 | lf | $253,400.00 |
| 4 | 2' wide gravel shoulder (both sides) | 14,480 | $6.00 | lf | $86,880.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (1) | 15 | $550.00 | lf | $8,250.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 14,480 | $0.12 | sf | $1,737.60 |
| | | | | | |
| **C** | **On-Road Facility** *(4,630 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 40 | $60.00 | ea | $2,400.00 |
| 2 | Crosswalks | 3 | $500.00 | ea | $1,500.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 0 | $2,500.00 | ea | $0.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.00 |
| 2 | Trail and street regulatory/warning signs | 1 | $200.00 | ea | $200.00 |
| 3 | Directional signs | 5 | $200.00 | ea | $1,000.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 1 | $400.00 | ea | $400.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 3 | $300.00 | ea | $900.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$378,787.60** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$38,372.00** |
| **B** | **Off-Road Facility** | | | | **$400,947.60** |
| **C** | **On-Road Facility** | | | | **$3,900.00** |
| **D** | **Utilities** | | | | **$0.00** |
| **E** | **Signage** | | | | **$1,600.00** |
| **F** | **Site Amenities** | | | | **$1,300.00** |
| | **SUBTOTAL** | | | | **$446,119.60** |
| | **Contingency** | | | 15% | **$66,917.94** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$513,037.54** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# NORTHERN SECTION: SEGMENT 4

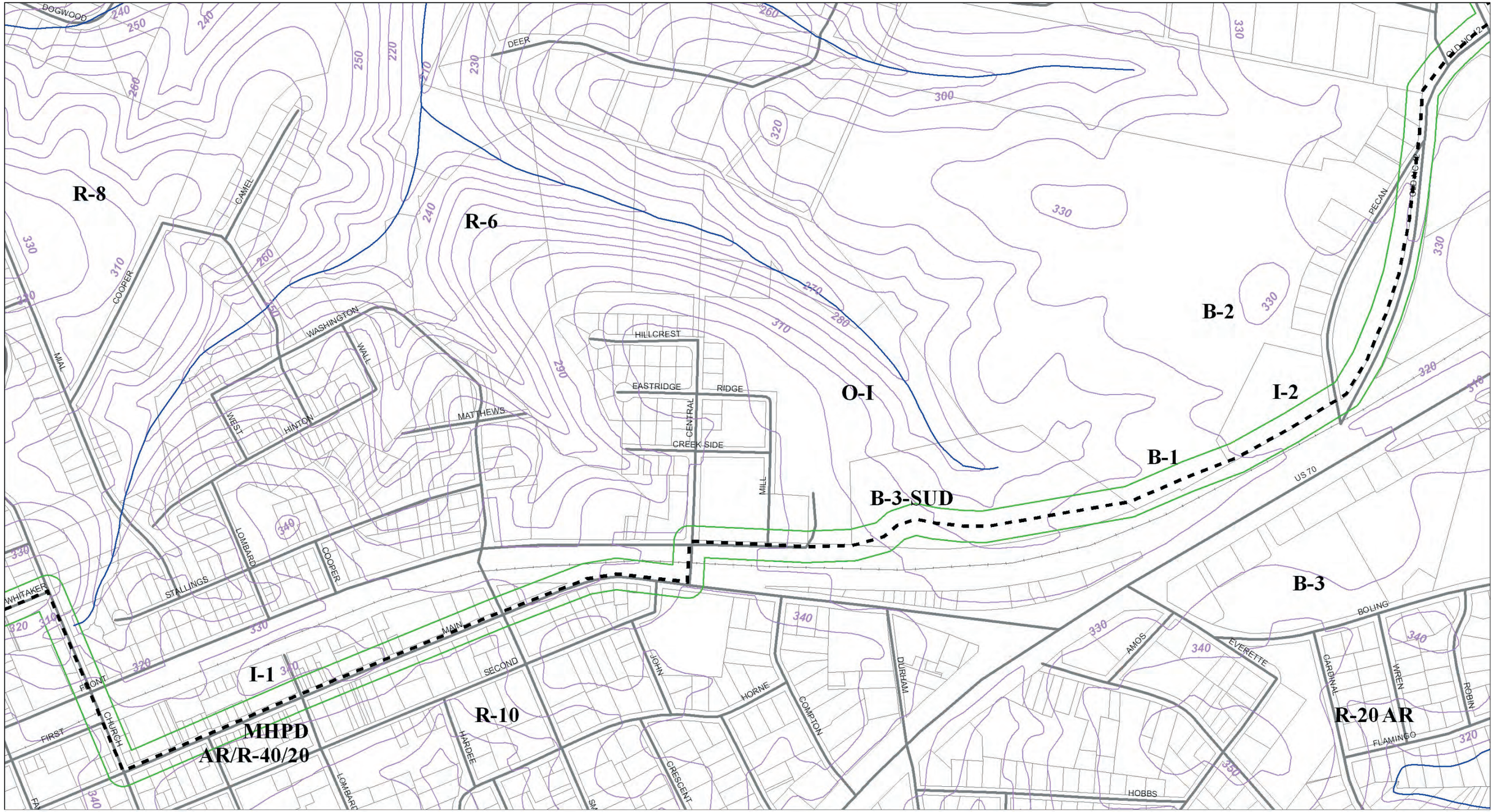




| | | | | | |
|---|---|---|---|---|---|
| | **Segment 5: 9,210 lf (1.74 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide)* | 33,740 | $0.25 | sf | $8,435.00 |
| | Dumping Fees (6% of Demolition total) | | | | $506.10 |
| | | | | Demolition Total | **$8,941.10** |
| | *Existing corridor partially cleared | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(4,480lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 4,480 | $4.00 | lf | $17,920.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 4,480 | $3.00 | lf | $13,440.00 |
| 3 | 10' wide multi-use asphalt trail | 4,480 | $35.00 | lf | $156,800.00 |
| 4 | 2' wide gravel shoulder (both sides) | 8,960 | $6.00 | lf | $53,760.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (1) | 0 | $550.00 | lf | $0.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 8,960 | $0.12 | sf | $1,075.20 |
| | | | | | |
| **C** | **On-Road Facility** *(4,730 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 46 | $60.00 | ea | $2,760.00 |
| 2 | Crosswalks | 12 | $500.00 | ea | $6,000.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 0 | $2,500.00 | ea | $0.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 8 | $200.00 | ea | $1,600.00 |
| 3 | Directional signs | 3 | $200.00 | ea | $600.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 0 | $400.00 | ea | $0.00 |
| 2 | Bicycle racks (holds 9 bikes) | 2 | $400.00 | ea | $800.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$237,035.20** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$8,941.10** |
| **B** | **Off-Road Facility** | | | | **$242,995.20** |
| **C** | **On-Road Facility** | | | | **$8,760.00** |
| **D** | **Utilities** | | | | **$0.00** |
| **E** | **Signage** | | | | **$2,400.00** |
| **F** | **Site Amenities** | | | | **$800.00** |
| | **SUBTOTAL** | | | | **$263,896.30** |
| | **Contingency** | | | 15% | **$39,584.45** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$303,480.75** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# NORTHERN SECTION: SEGMENT 5





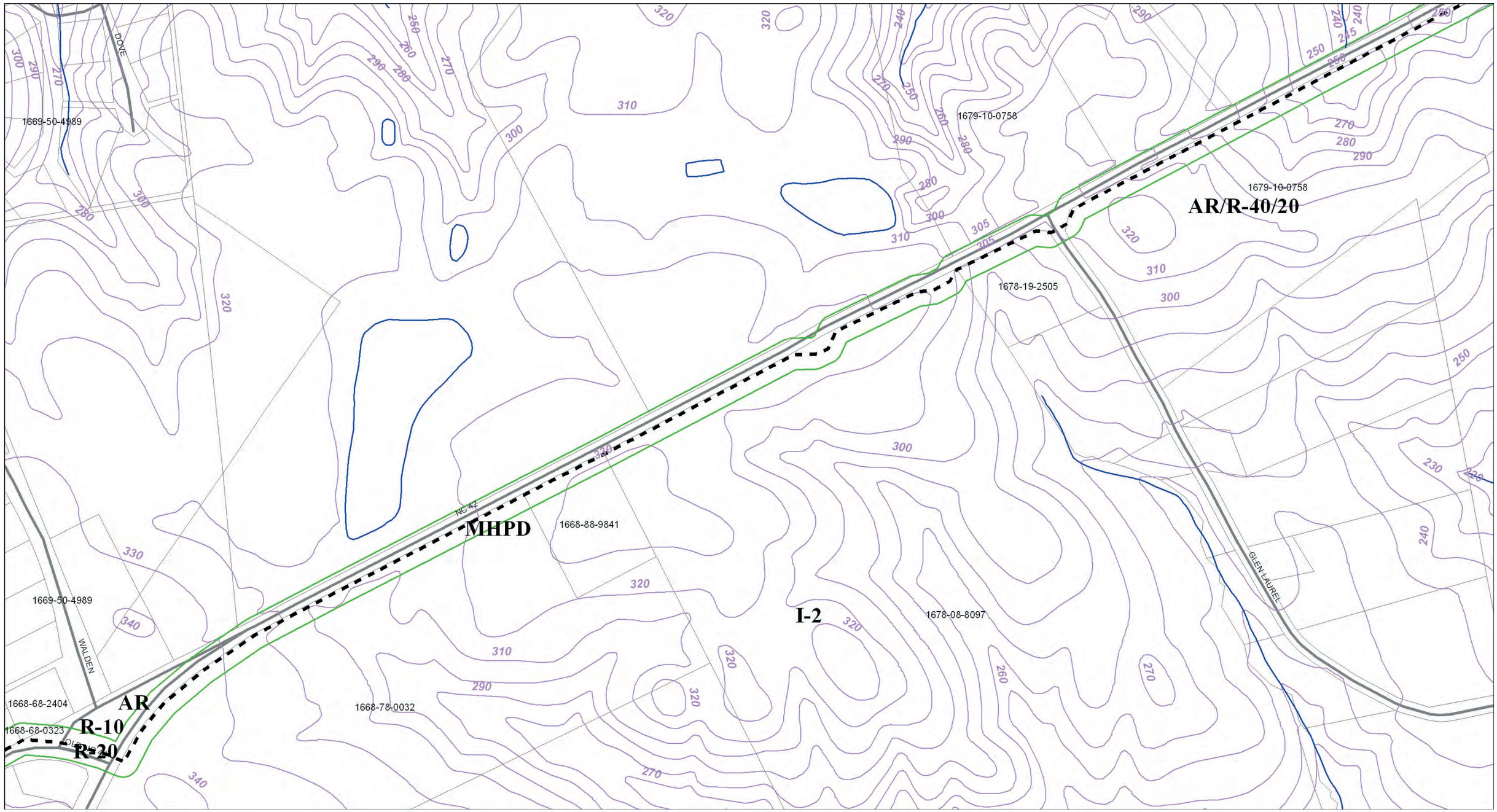

0 245 490 980 1,470 1,960 Feet

Neuse River
MST Mainline
Tributaries
10' Contours
Floodway
100 Year Flood
Marsh (JC Land Cover Data)
Stream Crossing
Parcels
150' Wide Corridor
1234-56-7890 NC Parcel Pin#
ABC Zoning/Land Use

| | | | | | |
|---|---|---|---|---|---|
| | **Segment 6: 7,630 lf (1.45 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide)* | 107,300 | $0.25 | sf | $26,825.00 |
| | Dumping Fees (6% of Demolition total) | | | | $1,609.50 |
| | | | | Demolition Total | **$28,434.50** |
| | *Existing corridor partially cleared | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(7,630lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 7,630 | $4.00 | lf | $30,520.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 7,630 | $3.00 | lf | $22,890.00 |
| 3 | 10' wide multi-use asphalt trail | 7,630 | $35.00 | lf | $267,050.00 |
| 4 | 2' wide gravel shoulder (both sides) | 15,260 | $6.00 | lf | $91,560.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (1) | 0 | $550.00 | lf | $0.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 15,260 | $0.12 | sf | $1,831.20 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 6 | $500.00 | ea | $3,000.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.00 |
| 2 | Trail and street regulatory/warning signs | 2 | $200.00 | ea | $400.00 |
| 3 | Directional signs | 2 | $200.00 | ea | $400.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$390,831.20** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$28,434.50** |
| **B** | **Off-Road Facility** | | | | **$413,851.20** |
| **C** | **On-Road Facility** | | | | **$3,000.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$1,200.00** |
| **F** | **Site Amenities** | | | | **$800.00** |
| | **SUBTOTAL** | | | | **$449,785.70** |
| | **Contingency** | | | 15% | **$67,467.86** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$517,253.56** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# NORTHERN SECTION: SEGMENT 6





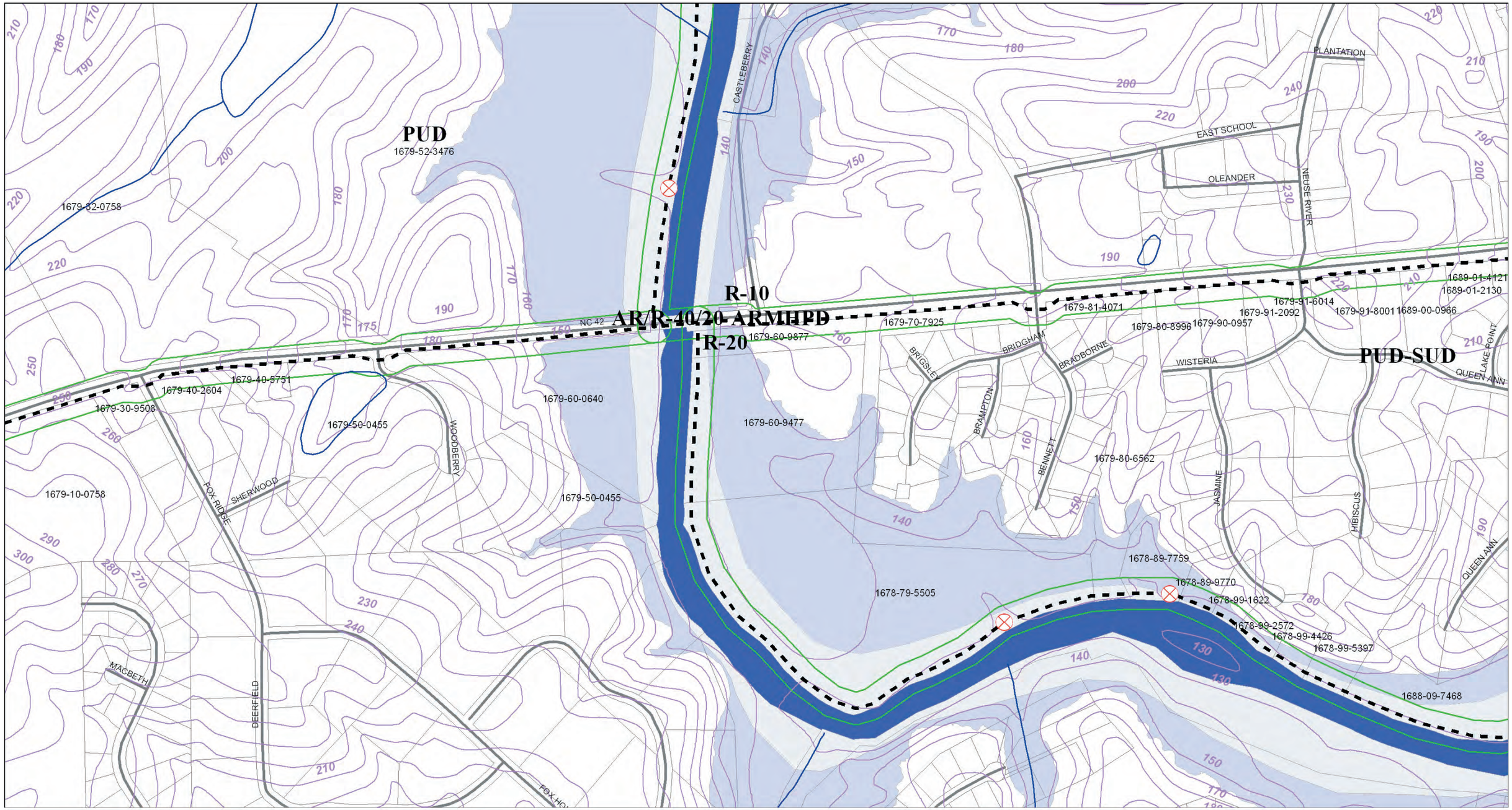

0 250 500 1,000 1,500 2,000 Feet

Neuse River
MST Mainline
Tributaries
10' Contours
Floodway
100 Year Flood
Marsh (JC Land Cover Data)
Stream Crossing
Parcels
150' Corridor Width
1234-56-7890 NC Parcel Pin#
ABC Zoning/Land Use

| | | | | | |
|---|---|---|---|---|---|
| | **Segment 7: 11,270 lf (2.13 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide)* | 201,100 | $0.25 | sf | $50,275.00 |
| | Dumping Fees (6% of Demolition total) | | | | $3,016.50 |
| | | | | Demolition Total | **$53,291.50** |
| | *Existing corridor partially cleared | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(10,920 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 10,920 | $4.00 | lf | $43,680.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 10,920 | $3.00 | lf | $32,760.00 |
| 3 | 10' wide multi-use asphalt trail | 10,920 | $35.00 | lf | $382,200.00 |
| 4 | 2' wide gravel shoulder (both sides) | 21,840 | $6.00 | lf | $131,040.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (2) | 40 | $550.00 | lf | $22,000.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 21,840 | $0.12 | sf | $2,620.80 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 6 | $500.00 | ea | $3,000.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 3 | $5,400.00 | ea | $16,200.00 |
| 2 | Solar powered light pole | 3 | $1,300.00 | ea | $3,900.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 3 | $200.00 | ea | $600.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 1 | $300.00 | ea | $300.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 0 | $400.00 | ea | $0.00 |
| 2 | Bicycle racks (holds 9 bikes) | 1 | $400.00 | ea | $400.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 2 | $500.00 | ea | $1,000.00 |
| 5 | Trash receptacles (32-gallon, steel) | 1 | $250.00 | ea | $250.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 1 | $20,000.00 | ea | $20,000.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$599,170.80** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$53,291.50** |
| **B** | **Off-Road Facility** | | | | **$614,300.80** |
| **C** | **On-Road Facility** | | | | **$3,000.00** |
| **D** | **Utilities** | | | | **$22,600.00** |
| **E** | **Signage** | | | | **$1,300.00** |
| **F** | **Site Amenities** | | | | **$21,650.00** |
| | **SUBTOTAL** | | | | **$716,142.30** |
| | **Contingency** | | | 15% | **$107,421.35** |
| | | | | | |
| | **SEGMENT TOTAL**** | | | | **$823,563.65** |
| | **This segment includes a minor MST trailhead. $200K of this trail will not need to be implemented if access is granted to the existing adjacent private trail.* | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# UPPER MIDDLE SECTION: SEGMENT 7





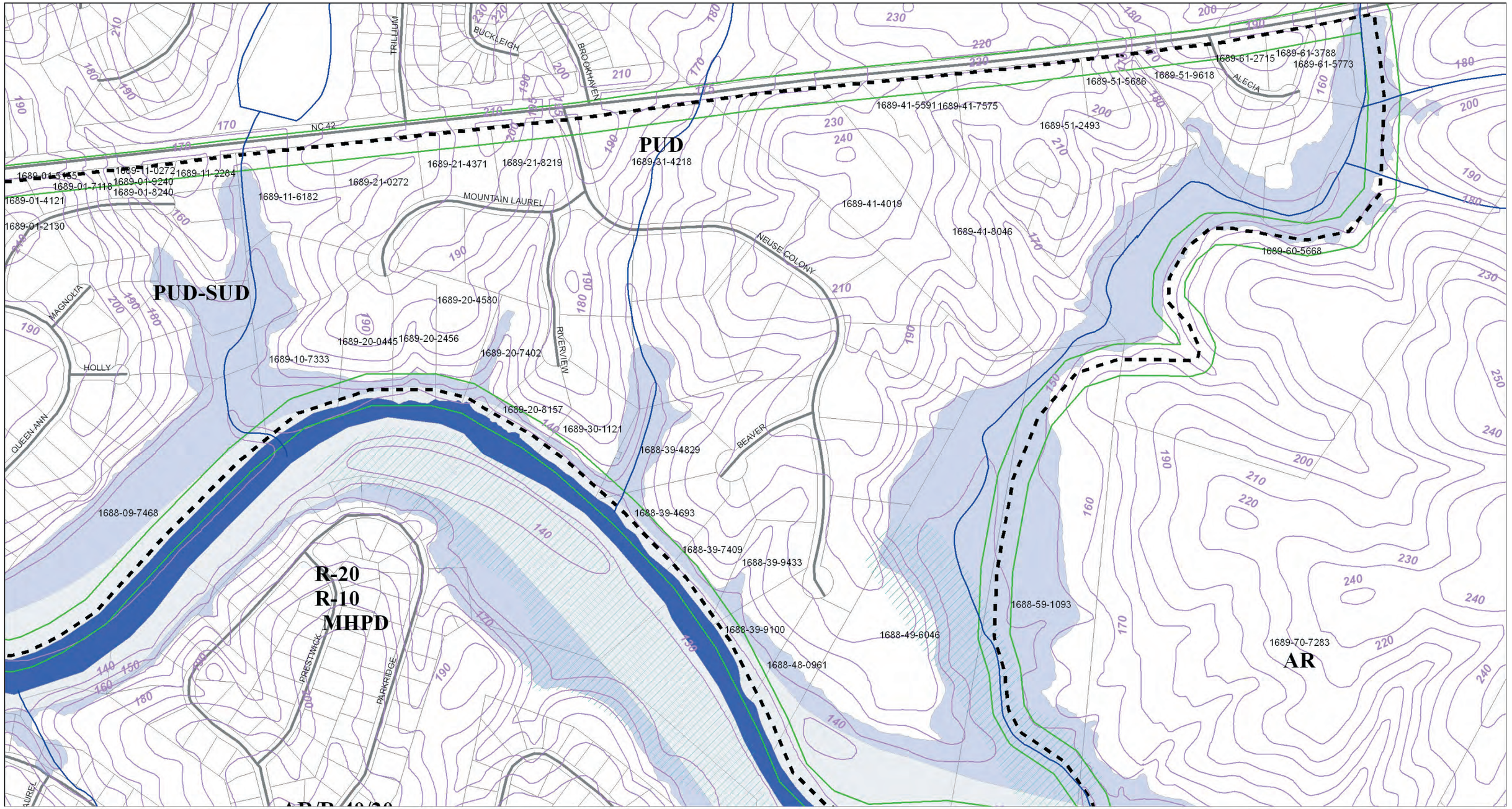

0 250 500 1,000 1,500 2,000 Feet

- Neuse River
- MST Mainline
- Tributaries
- 10' Contours
- Floodway
- 100 Year Flood
- Marsh (JC Land Cover Data)
- Stream Crossing
- Parcels
- 150' Corridor Width
- 1234-56-7890 NC Parcel Pin#
- ABC Zoning/Land Use

| | **Segment 8: 11,940 lf (2.26 miles)** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 238,800 | $0.25 | sf | $59,700.00 |
| | Dumping Fees (6% of Demolition total) | | | | $3,582.00 |
| | | | | Demolition Total | **$63,282.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(11,940 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 11,940 | $4.00 | lf | $47,760.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 11,940 | $3.00 | lf | $35,820.00 |
| 3 | 10' wide multi-use asphalt trail | 11,940 | $35.00 | lf | $417,900.00 |
| 4 | 2' wide gravel shoulder (both sides) | 23,880 | $6.00 | lf | $143,280.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (0) | 0 | $550.00 | lf | $0.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 23,880 | $0.12 | sf | $2,865.60 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 6 | $500.00 | ea | $3,000.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 3 | $400.00 | ea | $1,200.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 3 | $300.00 | ea | $900.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$608,065.60** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$63,282.00** |
| **B** | **Off-Road Facility** | | | | **$647,625.60** |
| **C** | **On-Road Facility** | | | | **$3,000.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$600.00** |
| **F** | **Site Amenities** | | | | **$2,100.00** |
| | **SUBTOTAL** | | | | **$719,107.60** |
| | **Contingency** | | | 15% | **$107,866.14** |
| | | | | | |
| | **SEGMENT TOTAL*** | | | | **$826,973.74** |
| | **This segment will not need to be implemented if access is granted to the existing adjacent private trail.* | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# UPPER MIDDLE SECTION: SEGMENT 8






0 250 500 1,000 1,500 2,000 Feet

- Neuse River
- MST Mainline
- Tributaries
- 10' Contours
- Floodway
- 100 Year Flood
- Marsh (JC Land Cover Data)
- Stream Crossing
- Parcels
- 150' Corridor Width
- 1234-56-7890 NC Parcel Pin#
- ABC Zoning/Land Use

| | | | | | |
|---|---|---|---|---|---|
| | **Segment 9: 6,970lf (1.32 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 139,400 | $0.25 | sf | $34,850.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,091.00 |
| | | | | Demolition Total | **$36,941.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(6,970 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 6,970 | $4.00 | lf | $27,880.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 6,970 | $3.00 | lf | $20,910.00 |
| 3 | 10' wide multi-use asphalt trail | 6,970 | $35.00 | lf | $243,950.00 |
| 4 | 2' wide gravel shoulder (both sides) | 13,940 | $6.00 | lf | $83,640.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (4) | 130 | $550.00 | lf | $71,500.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 13,940 | $0.12 | sf | $1,672.80 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$425,372.80** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$36,941.00** |
| **B** | **Off-Road Facility** | | | | **$449,552.80** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$400.00** |
| **F** | **Site Amenities** | | | | **$800.00** |
| | **SUBTOTAL** | | | | **$490,193.80** |
| | **Contingency** | | | 15% | **$73,529.07** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$563,722.87** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# UPPER MIDDLE SECTION: SEGMENT 9



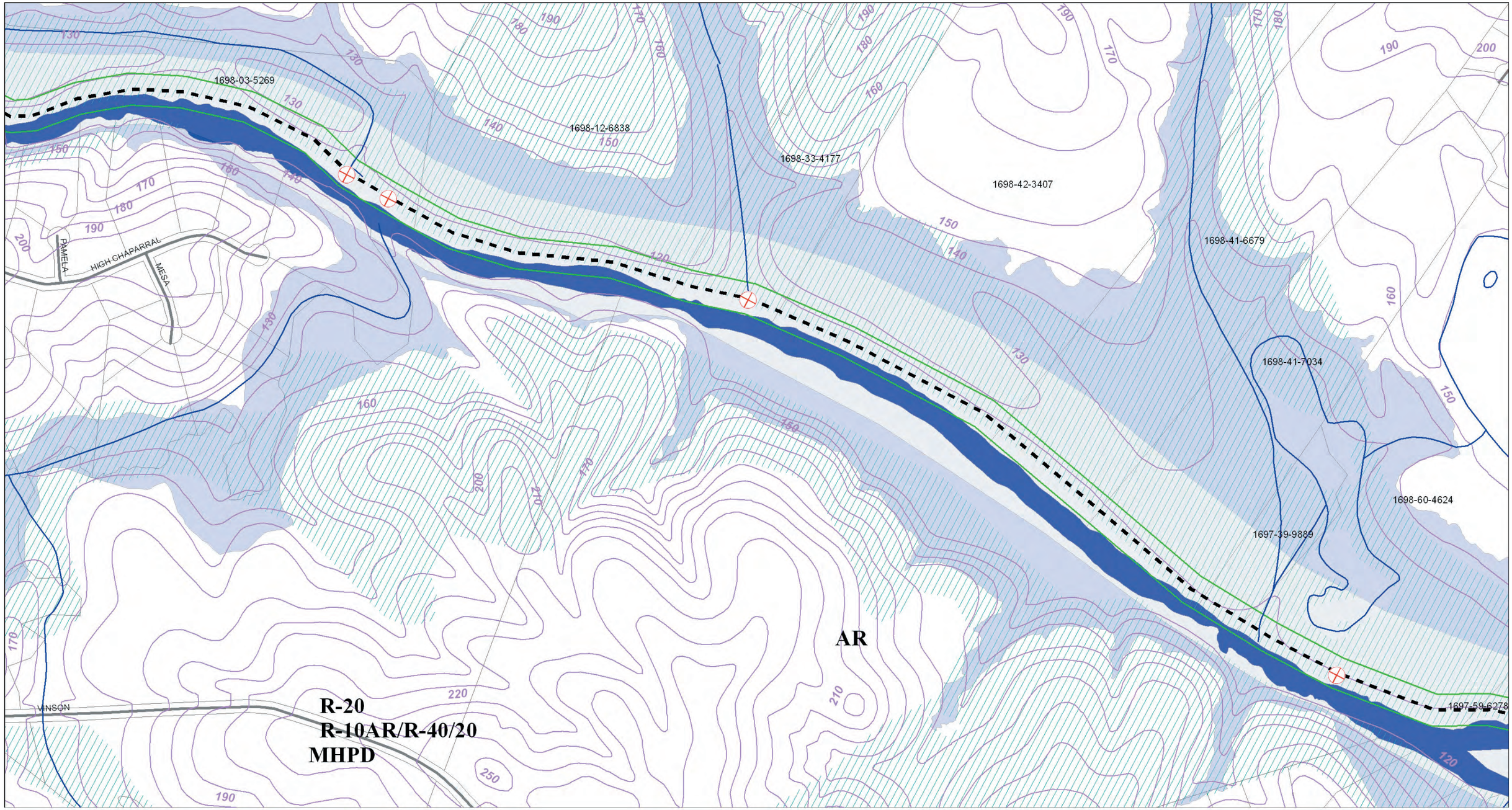

0 250 500 1,000 1,500 2,000 Feet

Neuse River
MST Mainline
Tributaries
10' Contours
Floodway
100 Year Flood
Marsh (JC Land Cover Data)
Stream Crossing
Parcels
150' Corridor Width
1234-56-7890 NC Parcel Pin#
ABC Zoning/Land Use

| | | | | | |
|---|---|---|---|---|---|
| | **Segment 10: 7,800 lf (1.48 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 156,000 | $0.25 | sf | $39,000.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,340.00 |
| | | | | Demolition Total | **$41,340.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(7,800 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 7,800 | $4.00 | lf | $31,200.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 7,800 | $3.00 | lf | $23,400.00 |
| 3 | 10' wide multi-use asphalt trail | 7,800 | $35.00 | lf | $273,000.00 |
| 4 | 2' wide gravel shoulder (both sides) | 15,600 | $6.00 | lf | $93,600.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (3) | 70 | $550.00 | lf | $38,500.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 1 | $40.00 | lf | $40.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 15,600 | $0.12 | sf | $1,872.00 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 0 | $200.00 | ea | $0.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$434,112.00** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$41,340.00** |
| **B** | **Off-Road Facility** | | | | **$461,612.00** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$400.00** |
| **F** | **Site Amenities** | | | | **$800.00** |
| | **SUBTOTAL** | | | | **$506,652.00** |
| | **Contingency** | | | 15% | **$75,997.80** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$582,649.80** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# UPPER MIDDLE SECTION: SEGMENT 10

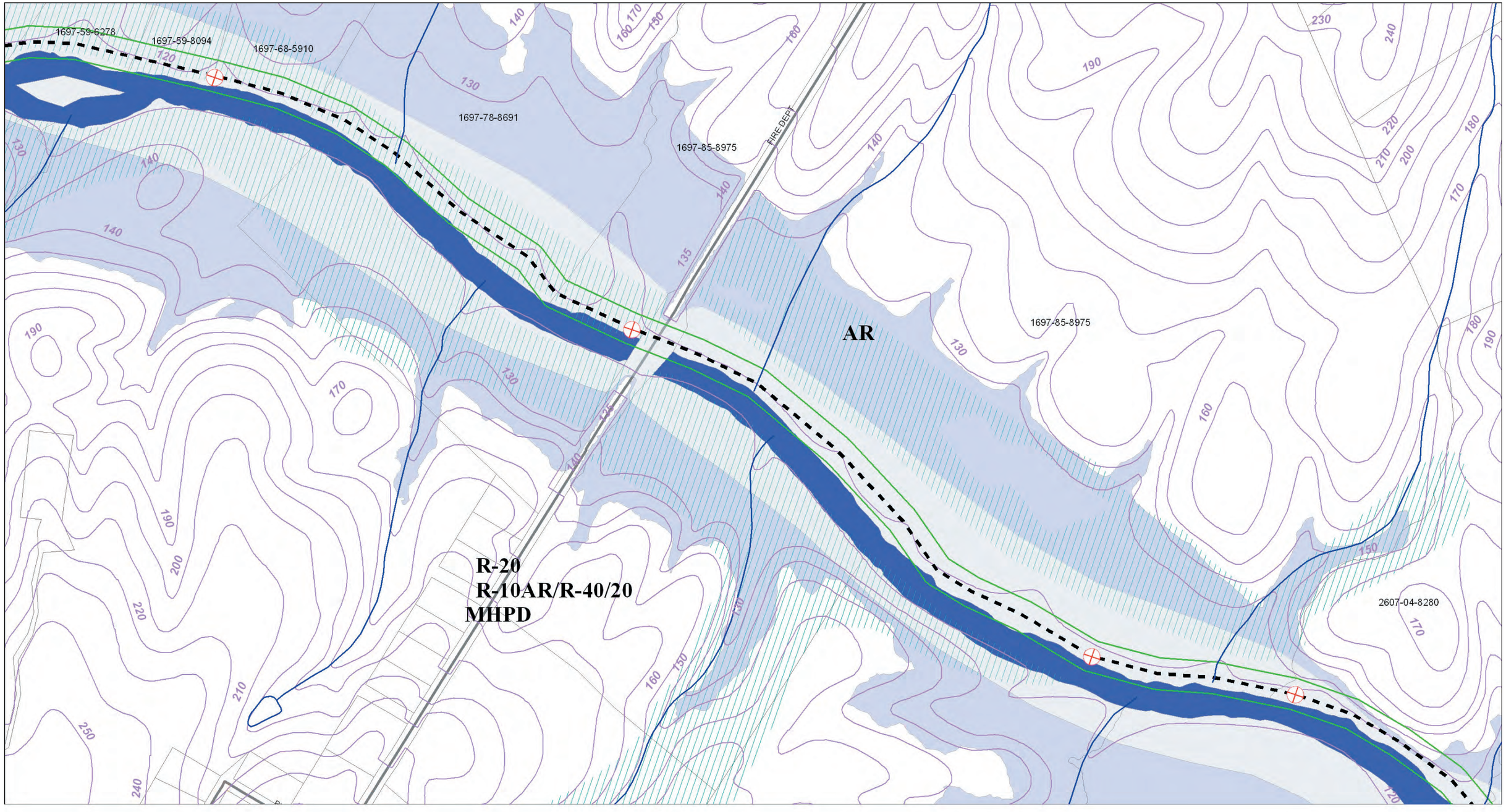




| | **Segment 11: 7,850 lf (1.49 miles)** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 157,000 | $0.25 | sf | $39,250.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,355.00 |
| | | | | Demolition Total | **$41,605.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(7,850 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 7,850 | $4.00 | lf | $31,400.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 7,850 | $3.00 | lf | $23,550.00 |
| 3 | 10' wide multi-use asphalt trail | 7,850 | $35.00 | lf | $274,750.00 |
| 4 | 2' wide gravel shoulder (both sides) | 15,700 | $6.00 | lf | $94,200.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (4) | 67 | $550.00 | lf | $36,850.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 15,700 | $0.12 | sf | $1,884.00 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 3 | $5,400.00 | ea | $16,200.00 |
| 2 | Solar powered light pole | 3 | $1,300.00 | ea | $3,900.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 1 | $200.00 | ea | $200.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 1 | $300.00 | ea | $300.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 1 | $2,000.00 | ea | $2,000.00 |
| 4 | Picnic tables/ tables | 3 | $500.00 | ea | $1,500.00 |
| 5 | Trash receptacles (32-gallon, steel) | 1 | $250.00 | ea | $250.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 1 | $20,000.00 | ea | $20,000.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$459,284.00** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$41,605.00** |
| **B** | **Off-Road Facility** | | | | **$462,634.00** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$22,600.00** |
| **E** | **Signage** | | | | **$900.00** |
| **F** | **Site Amenities** | | | | **$24,550.00** |
| | **SUBTOTAL** | | | | **$552,289.00** |
| | **Contingency** | | | 15% | **$82,843.35** |
| | | | | | |
| | **SEGMENT TOTAL*** | | | | **$635,132.35** |
| | **This segment includes a minor MST trailhead.* | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes,* ***or the access road for the trailhead.*** | | | | |

# UPPER MIDDLE SECTION: SEGMENT 11





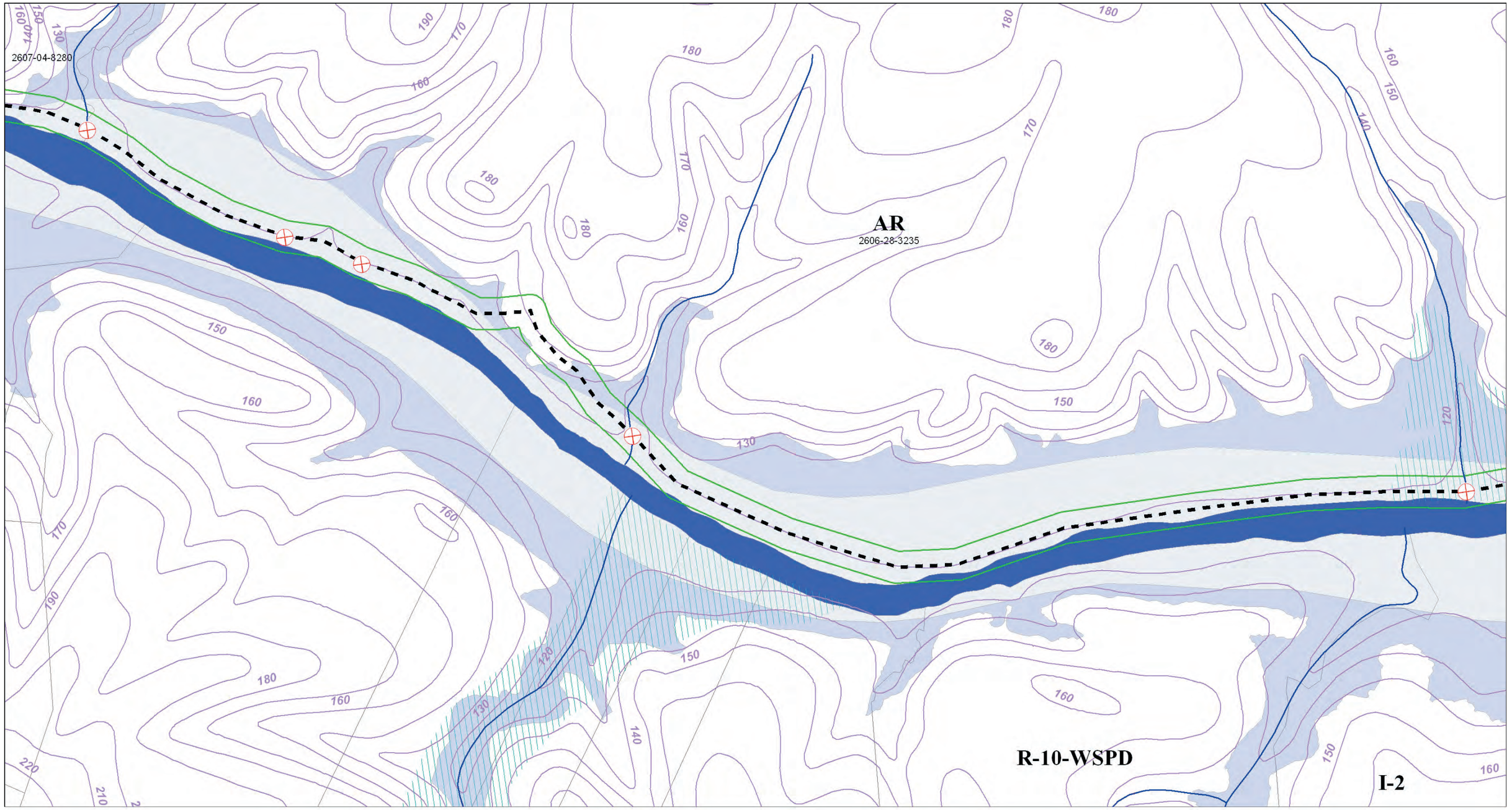

0 250 500 1,000 1,500 2,000 Feet

- Neuse River
- MST Mainline
- Tributaries
- 10' Contours
- Floodway
- 100 Year Flood
- Marsh (JC Land Cover Data)
- Stream Crossing
- Parcels
- 150' Corridor Width
- 1234-56-7890 NC Parcel Pin#
- ABC Zoning/Land Use

| | **Segment 12: 7,230 lf (1.37 miles)** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 144,600 | $0.25 | sf | $36,150.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,169.00 |
| | | | | Demolition Total | **$38,319.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(7,230 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 7,230 | $4.00 | lf | $28,920.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 7,230 | $3.00 | lf | $21,690.00 |
| 3 | 10' wide multi-use asphalt trail | 7,230 | $35.00 | lf | $253,050.00 |
| 4 | 2' wide gravel shoulder (both sides) | 14,460 | $6.00 | lf | $86,760.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (3) | 70 | $550.00 | lf | $38,500.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 1 | $40.00 | lf | $40.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 14,460 | $0.12 | sf | $1,735.20 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 0 | $200.00 | ea | $0.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 3 | $400.00 | ea | $1,200.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$405,675.20** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$38,319.00** |
| **B** | **Off-Road Facility** | | | | **$430,695.20** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$200.00** |
| **F** | **Site Amenities** | | | | **$1,200.00** |
| | **SUBTOTAL** | | | | **$472,914.20** |
| | **Contingency** | | | 15% | **$70,937.13** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$543,851.33** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# UPPER MIDDLE SECTION: SEGMENT 12

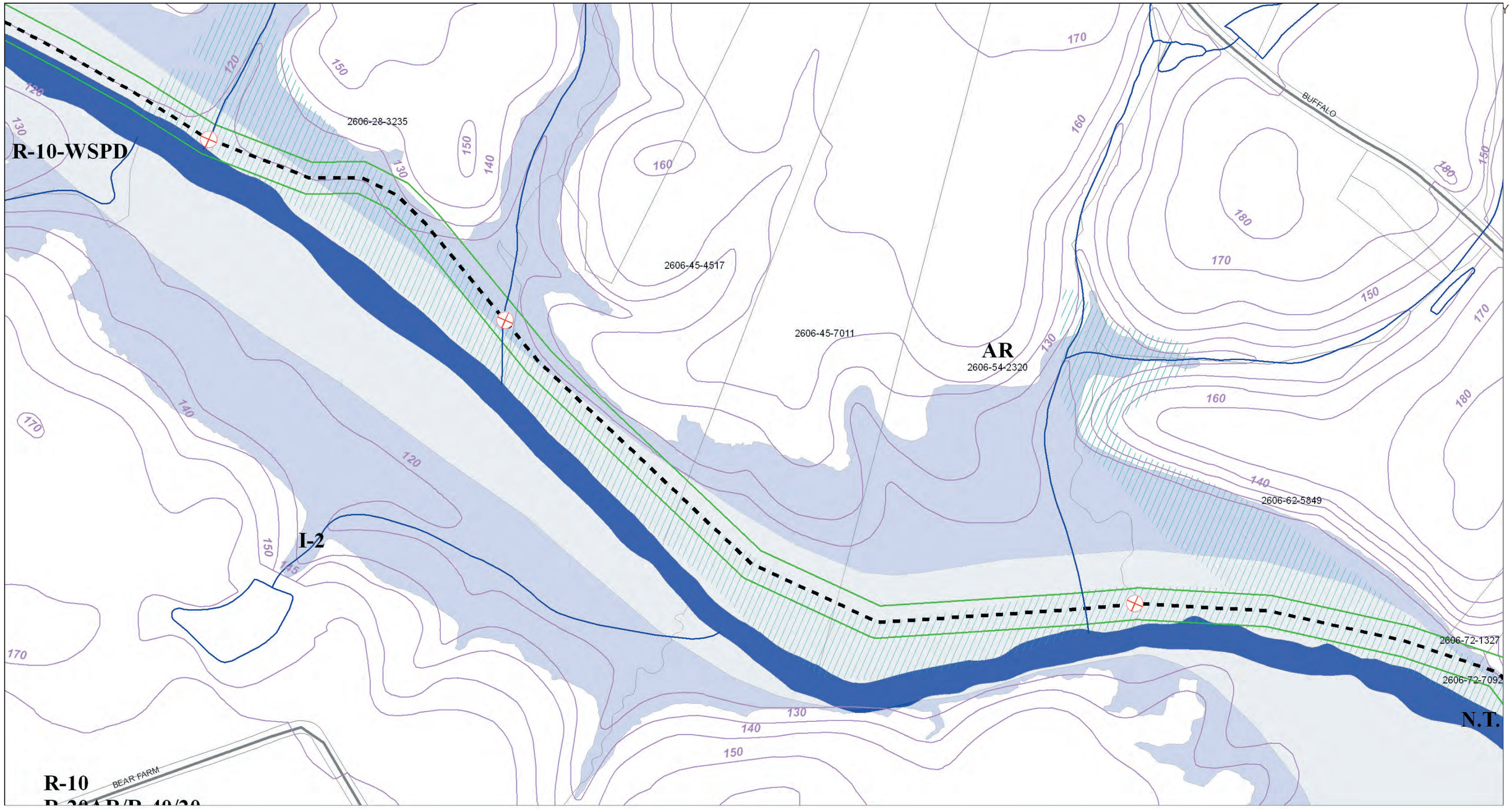




| | **Segment 13: 6,890 lf (1.30 miles)** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 137,800 | $0.25 | sf | $34,450.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,067.00 |
| | | | | Demolition Total | **$36,517.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(6,890 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 6,890 | $4.00 | lf | $27,560.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 6,890 | $3.00 | lf | $20,670.00 |
| 3 | 10' wide multi-use asphalt trail | 6,890 | $35.00 | lf | $241,150.00 |
| 4 | 2' wide gravel shoulder (both sides) | 13,780 | $6.00 | lf | $82,680.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (3) | 90 | $550.00 | lf | $49,500.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 13,780 | $0.12 | sf | $1,653.60 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 0 | $200.00 | ea | $0.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$399,153.60** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$36,517.00** |
| **B** | **Off-Road Facility** | | | | **$423,213.60** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$200.00** |
| **F** | **Site Amenities** | | | | **$800.00** |
| | **SUBTOTAL** | | | | **$463,230.60** |
| | **Contingency** | | | 15% | **$69,484.59** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$532,715.19** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# LOWER MIDDLE SECTION: SEGMENT 13





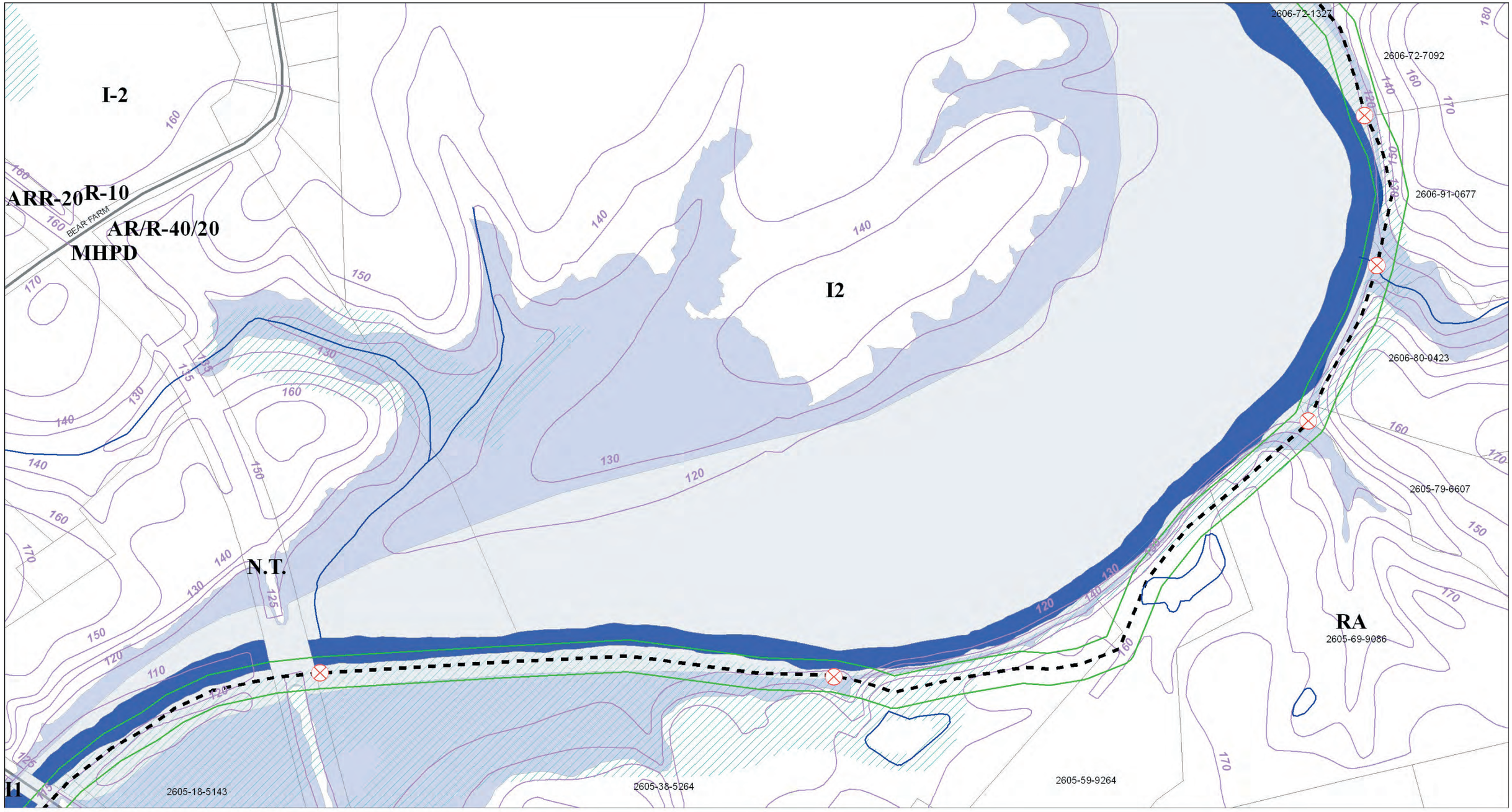

0 250 500 1,000 1,500 2,000 Feet

Neuse River
MST Mainline
Tributaries
10' Contours
Floodway
100 Year Flood
Marsh (JC Land Cover Data)
Stream Crossing
Parcels
150' Corridor Width
1234-56-7890 NC Parcel Pin#
ABC Zoning/Land Use

| | | | | | |
|---|---|---|---|---|---|
| | **Segment 14: 8,760 lf (1.66 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 175,200 | $0.25 | sf | $43,800.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,628.00 |
| | | | | Demolition Total | **$46,428.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(8,760 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 8,760 | $4.00 | lf | $35,040.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 8,760 | $3.00 | lf | $26,280.00 |
| 3 | 10' wide multi-use asphalt trail | 8,760 | $35.00 | lf | $306,600.00 |
| 4 | 2' wide gravel shoulder (both sides) | 17,520 | $6.00 | lf | $105,120.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (5) | 92 | $550.00 | lf | $50,600.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 17,520 | $0.12 | sf | $2,102.40 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 2 | $2,500.00 | ea | $5,000.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 0 | $200.00 | ea | $0.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 3 | $400.00 | ea | $1,200.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$497,302.40** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$46,428.00** |
| **B** | **Off-Road Facility** | | | | **$525,742.40** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$5,000.00** |
| **E** | **Signage** | | | | **$400.00** |
| **F** | **Site Amenities** | | | | **$1,200.00** |
| | **SUBTOTAL** | | | | **$578,770.40** |
| | **Contingency** | | | 15% | **$86,815.56** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$665,585.96** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# LOWER MIDDLE SECTION: SEGMENT 14

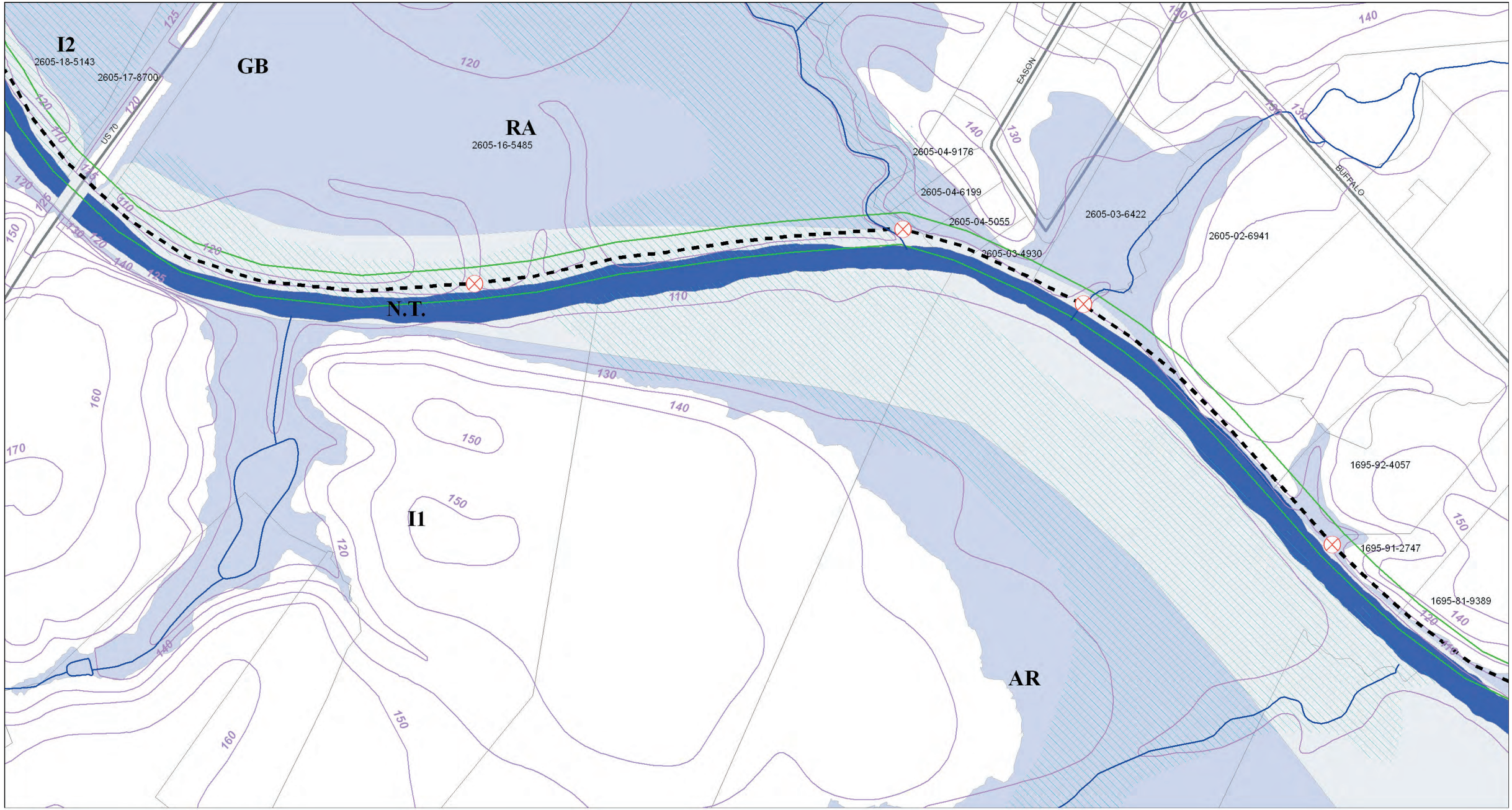


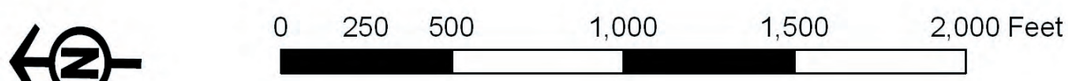


| | **Segment 15: 7,190 lf (1.36 miles)** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 143,800 | $0.25 | sf | $35,950.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,157.00 |
| | | | | Demolition Total | **$38,107.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(7,190 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 7,190 | $4.00 | lf | $28,760.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 7,190 | $3.00 | lf | $21,570.00 |
| 3 | 10' wide multi-use asphalt trail | 7,190 | $35.00 | lf | $251,650.00 |
| 4 | 2' wide gravel shoulder (both sides) | 14,380 | $6.00 | lf | $86,280.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (4) | 97 | $550.00 | lf | $53,350.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 14,380 | $0.12 | sf | $1,725.60 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 0 | $200.00 | ea | $0.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$418,075.60** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$38,107.00** |
| **B** | **Off-Road Facility** | | | | **$443,335.60** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$200.00** |
| **F** | **Site Amenities** | | | | **$800.00** |
| | **SUBTOTAL** | | | | **$484,942.60** |
| | **Contingency** | | | 15% | **$72,741.39** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$557,683.99** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# LOWER MIDDLE SECTION: SEGMENT 15





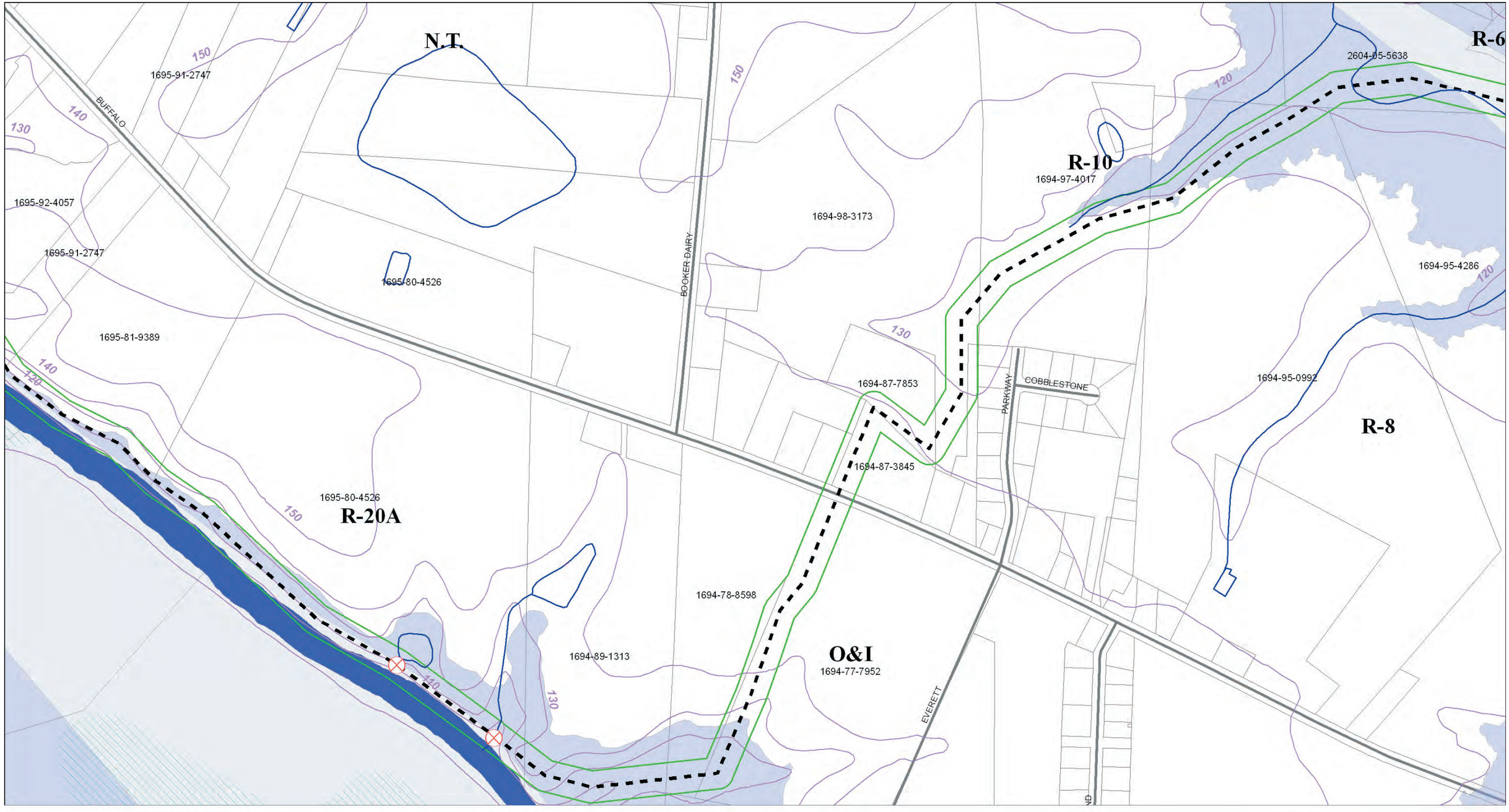




Neuse River
MST Mainline
Tributaries
10' Contours
Floodway
100 Year Flood
Marsh (JC Land Cover Data)
Stream Crossing
Parcels
150' Corridor Width
1234-56-7890 NC Parcel Pin#
ABC Zoning/Land Use

| | **Segment 16: 5,460 lf (1.03 miles)*** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 109,200 | $0.25 | sf | $27,300.00 |
| | Dumping Fees (6% of Demolition total) | | | | $1,638.00 |
| | | | | Demolition Total | **$28,938.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(5,460 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 5,460 | $4.00 | lf | $21,840.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 5,460 | $3.00 | lf | $16,380.00 |
| 3 | 10' wide multi-use asphalt trail | 5,460 | $35.00 | lf | $191,100.00 |
| 4 | 2' wide gravel shoulder (both sides) | 10,920 | $6.00 | lf | $65,520.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (2) | 45 | $550.00 | lf | $24,750.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 10,920 | $0.12 | sf | $1,310.40 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 1 | $500.00 | ea | $500.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.00 |
| 2 | Trail and street regulatory/warning signs | 2 | $200.00 | ea | $400.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 3 | $400.00 | ea | $1,200.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$304,260.40** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$28,938.00** |
| **B** | **Off-Road Facility** | | | | **$320,900.40** |
| **C** | **On-Road Facility** | | | | **$500.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$1,000.00** |
| **F** | **Site Amenities** | | | | **$1,200.00** |
| | **SUBTOTAL** | | | | **$355,038.40** |
| | **Contingency** | | | 15% | **$53,255.76** |
| | | | | | |
| | **SEGMENT TOTAL*** | | | | **$408,294.16** |
| | **This segment estimate does not include 4,300 lf (0.81 miles) of the Buffalo Creek Greenway (see page 49), because it is already mostly funded.* | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# LOWER MIDDLE SECTION: SEGMENT 16





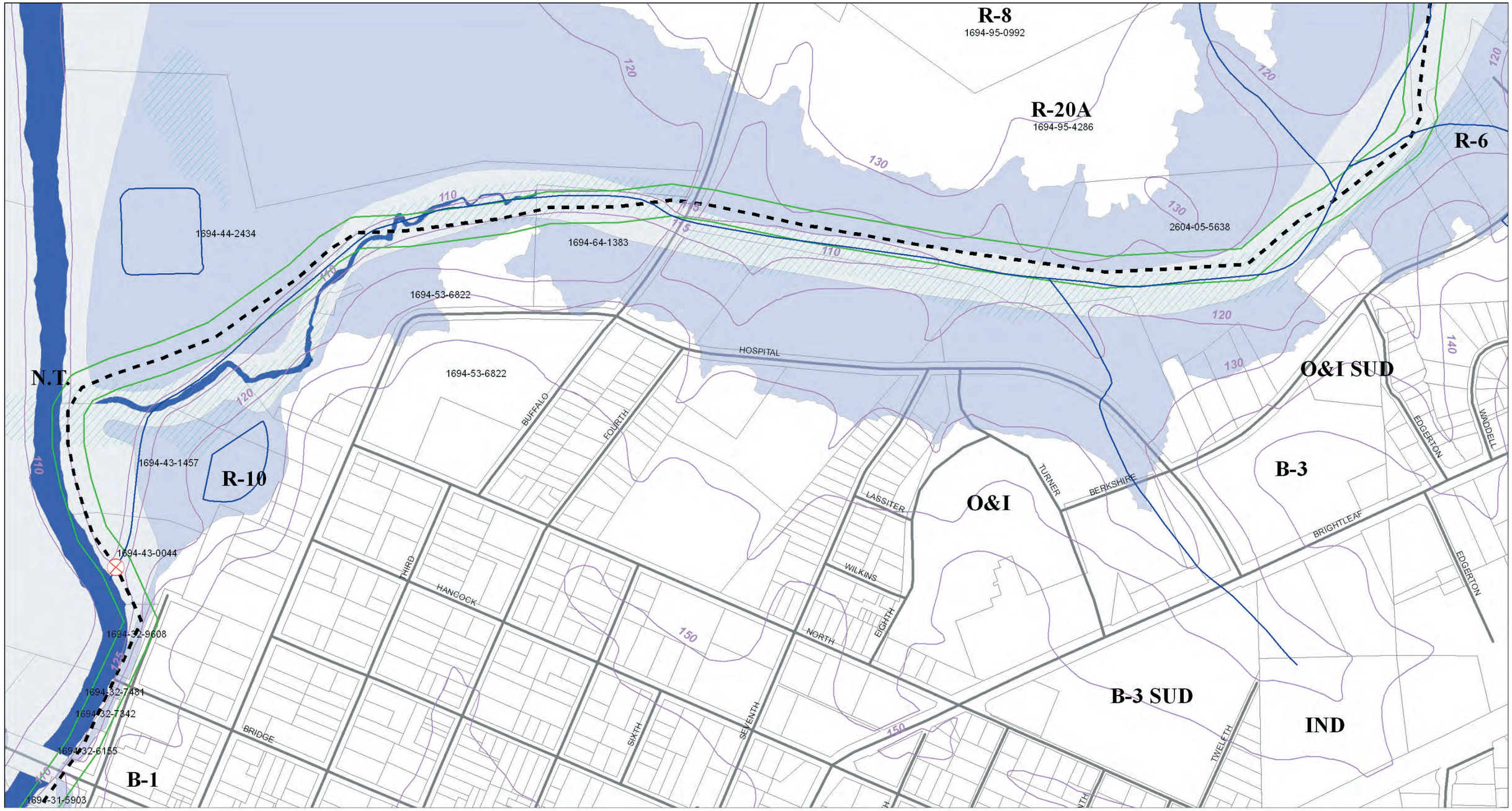

0 250 500 1,000 1,500 2,000 Feet

- Neuse River
- MST Mainline
- Tributaries
- 10' Contours
- Floodway
- 100 Year Flood
- Marsh (JC Land Cover Data)
- Stream Crossing
- Parcels
- 150' Corridor Width
- 1234-56-7890 NC Parcel Pin#
- ABC Zoning/Land Use

| | **Segment 17: 1,000 lf (1.89 miles)*** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtota** |
| | | | | | |
| **A** | Excavating old Town Commons trail (20' wide) | 20,000 | $2.00 | sf | $40,000.0 |
| | Dumping Fees (6% of Demolition total) | | | | $2,400.0 |
| | | | | Demolition Total | **$42,400.0** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtota** |
| | | | | | |
| **B** | **Off-Road Facility** *(1000 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 1,000 | $4.00 | lf | $4,000.0 |
| 2 | Trail grading (0-5 cu ft/lf) | 1,000 | $3.00 | lf | $3,000.0 |
| 3 | 10' wide multi-use asphalt trail | 1,000 | $35.00 | lf | $35,000.0 |
| 4 | 2' wide gravel shoulder (both sides) | 2,000 | $6.00 | lf | $12,000.0 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.0 |
| 6 | Bike/Ped Bridge (1) | 35 | $550.00 | lf | $19,250.0 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.0 |
| 8 | Seeding or mulching trail edges (5' both sides) | 2,000 | $0.12 | sf | $240.0 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.0 |
| 2 | Crosswalks | 1 | $500.00 | ea | $500.0 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.0 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.0 |
| 3 | Emergency phones | 2 | $2,500.00 | ea | $5,000.0 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.0 |
| 2 | Trail and street regulatory/warning signs | 2 | $200.00 | ea | $400.0 |
| 3 | Directional signs | 3 | $200.00 | ea | $600.0 |
| 4 | Educational signs | 1 | $300.00 | ea | $300.0 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 1 | $400.00 | ea | $400.0 |
| 2 | Bicycle racks (holds 9 bikes) | 1 | $400.00 | ea | $400.0 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.0 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.0 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.0 |
| 6 | Bollards (3 per trail/road intersection) | 3 | $300.00 | ea | $900.0 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.0 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.0 |
| | | | | | |
| | | | | Site Development Total | **$78,390.0** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$42,400.0** |
| **B** | **Off-Road Facility** | | | | **$73,490.0** |
| **C** | **On-Road Facility** | | | | **$500.0** |
| **D** | **Utilities** | | | | **$5,000.0** |
| **E** | **Signage** | | | | **$1,700.0** |
| **F** | **Site Amenities** | | | | **$1,700.0** |
| | **SUBTOTAL** | | | | **$124,790.0** |
| | **Contingency** | | | 15% | **$18,718.5** |
| | | | | | |
| | **SEGMENT TOTAL*** | | | | **$143,508.5** |
| | **This segment estimate does not include 8,400 lf (1.6 miles) of the Buffalo Creek Greenway (see page 49), because it is already mostly funded. The 1,000 lf is to replace the existing Town Commons trail.* | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# SOUTHERN SECTION: SEGMENT 17






0 250 500 1,000 1,500 2,000 Feet

Neuse River
MST Mainline
Tributaries
10' Contours
Floodway
100 Year Flood
Marsh (JC Land Cover Data)
Stream Crossing
Parcels
150' Corridor Width
1234-56-7890 NC Parcel Pin#
ABC Zoning/Land Use

| | **Segment 18: 6,480 lf (1.23 miles)*** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 0 | $0.25 | sf | $0.00 |
| | Dumping Fees (6% of Demolition total) | | | | $0.00 |
| | | | | Demolition Total | **$0.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(0 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 0 | $4.00 | lf | $0.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 0 | $3.00 | lf | $0.00 |
| 3 | 10' wide multi-use asphalt trail | 0 | $35.00 | lf | $0.00 |
| 4 | 2' wide gravel shoulder (both sides) | 0 | $6.00 | lf | $0.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (0) | 0 | $550.00 | lf | $0.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 0 | $0.12 | sf | $0.00 |
| | | | | | |
| **C** | **On-Road Facility** *(6,480 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 56 | $60.00 | ea | $3,360.00 |
| 2 | Crosswalks | 11 | $500.00 | ea | $5,500.00 |
| 3 | Sidewalk (5' wide) | 14,850 | $3.00 | sf | $44,550.00 |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 0 | $2,500.00 | ea | $0.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 0 | $200.00 | ea | $0.00 |
| 3 | Directional signs | 2 | $200.00 | ea | $400.00 |
| 4 | Educational signs | 0 | $300.00 | ea | $0.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 0 | $400.00 | ea | $0.00 |
| 2 | Bicycle racks (holds 9 bikes) | 1 | $400.00 | ea | $400.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 3 | $300.00 | ea | $900.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$55,310.00** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$0.00** |
| **B** | **Off-Road Facility** | | | | **$0.00** |
| **C** | **On-Road Facility** | | | | **$53,410.00** |
| **D** | **Utilities** | | | | **$0.00** |
| **E** | **Signage** | | | | **$600.00** |
| **F** | **Site Amenities** | | | | **$1,300.00** |
| | **SUBTOTAL** | | | | **$55,310.00** |
| | **Contingency** | | | 15% | **$8,296.50** |
| | | | | | |
| | **SEGMENT TOTAL*** | | | | **$63,606.50** |
| | **This segment estimate does not include the 2,390 lf (0.45 miles) of existing trail through Wallace Park (see page 49).* | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# SOUTHERN SECTION: SEGMENT 18



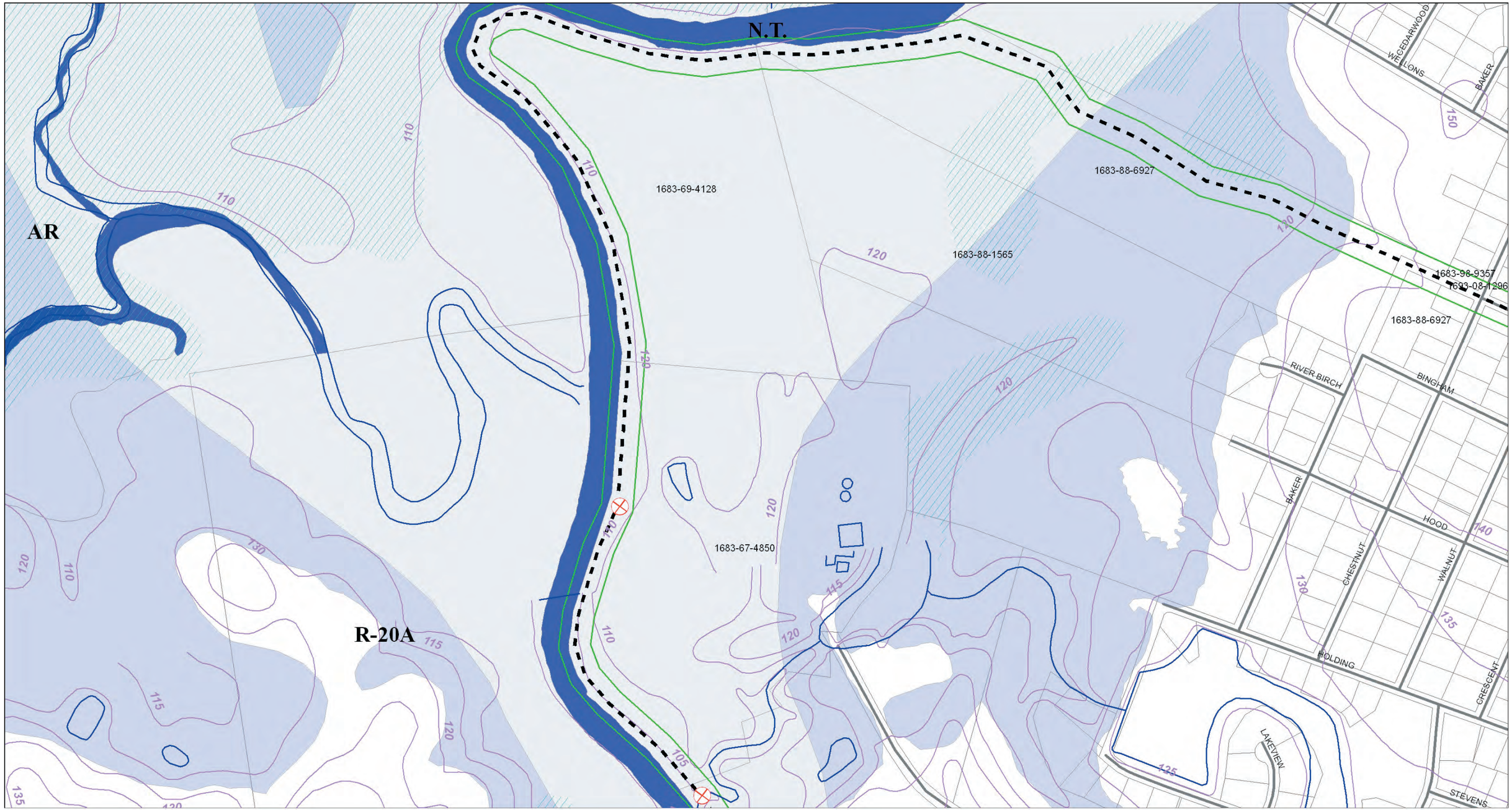

0 250 500 1,000 1,500 2,000 Feet

- Neuse River
- MST Mainline
- Tributaries
- 10' Contours
- Floodway
- 100 Year Flood
- Marsh (JC Land Cover Data)
- Stream Crossing
- Parcels
- 150' Corridor Width
- 1234-56-7890 NC Parcel Pin#
- ABC Zoning/Land Use

| | | | | | |
|---|---|---|---|---|---|
| | **Segment 19: 9,260 lf (1.75 miles)** | | | | |
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 185,200 | $0.25 | sf | $46,300.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,778.00 |
| | | | | Demolition Total | **$49,078.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(9,260 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 9,260 | $4.00 | lf | $37,040.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 9,260 | $3.00 | lf | $27,780.00 |
| 3 | 10' wide multi-use asphalt trail | 9,260 | $35.00 | lf | $324,100.00 |
| 4 | 2' wide gravel shoulder (both sides) | 18,520 | $6.00 | lf | $111,120.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (2) | 45 | $550.00 | lf | $24,750.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 18,520 | $0.12 | sf | $2,222.40 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 0 | $5,400.00 | ea | $0.00 |
| 2 | Solar powered light pole | 0 | $1,300.00 | ea | $0.00 |
| 3 | Emergency phones | 1 | $2,500.00 | ea | $2,500.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 2 | $200.00 | ea | $400.00 |
| 2 | Trail and street regulatory/warning signs | 2 | $200.00 | ea | $400.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 2 | $300.00 | ea | $600.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 3 | $400.00 | ea | $1,200.00 |
| 2 | Bicycle racks (holds 9 bikes) | 0 | $400.00 | ea | $0.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 0 | $500.00 | ea | $0.00 |
| 5 | Trash receptacles (32-gallon, steel) | 0 | $250.00 | ea | $0.00 |
| 6 | Bollards (3 per trail/road intersection) | 0 | $300.00 | ea | $0.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$495,272.40** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$49,078.00** |
| **B** | **Off-Road Facility** | | | | **$527,012.40** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$2,500.00** |
| **E** | **Signage** | | | | **$1,600.00** |
| **F** | **Site Amenities** | | | | **$1,200.00** |
| | **SUBTOTAL** | | | | **$581,390.40** |
| | **Contingency** | | | 15% | **$87,208.56** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$668,598.96** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# SOUTHERN SECTION: SEGMENT 19






N

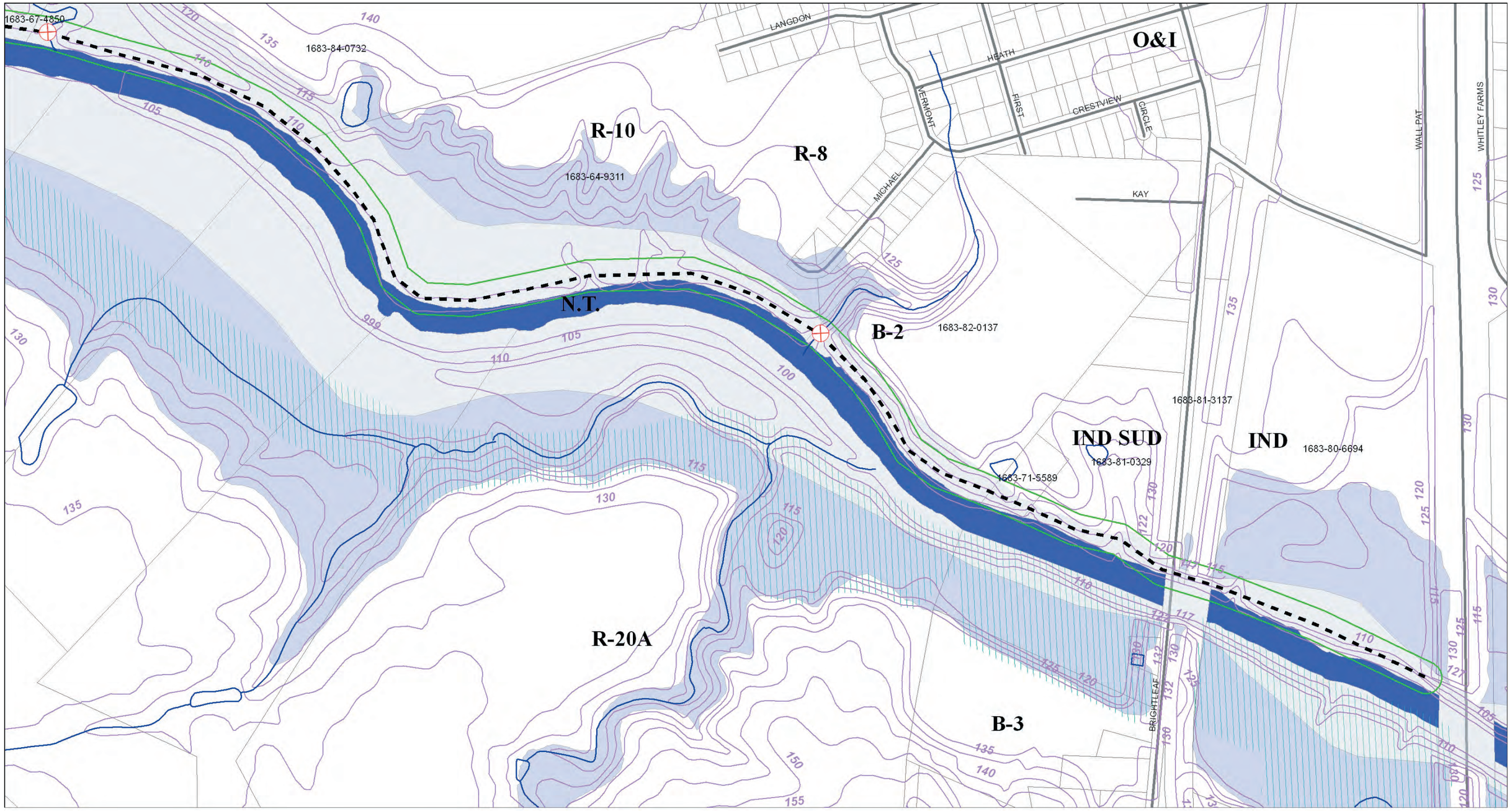
0 250 500 1,000 1,500 2,000 Feet

- Neuse River
- MST Mainline
- Tributaries
- 10' Contours
- Floodway
- 100 Year Flood
- Marsh (JC Land Cover Data)
- Stream Crossing
- Parcels
- 150' Corridor Width
- 1234-56-7890 NC Parcel Pin#
- ABC Zoning/Land Use

| | **Segment 20: 7,670 lf (1.45 miles)** | | | | |
|---|---|---|---|---|---|
| | Probable Estimate of Construction Costs | | | | |
| | 2006 | | | | |
| | | | | | |
| | **Demolition** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **A** | Clearing and grubbing understory (20' wide) | 153,400 | $0.25 | sf | $38,350.00 |
| | Dumping Fees (6% of Demolition total) | | | | $2,301.00 |
| | | | | Demolition Total | **$40,651.00** |
| | | | | | |
| | | | | | |
| | **Site Development** | **Quantity** | **Cost** | **Unit** | **Subtotal** |
| | | | | | |
| **B** | **Off-Road Facility** *(7,670 lf)* | | | | |
| 1 | Temporary tree protection/silt fence | 7,670 | $4.00 | lf | $30,680.00 |
| 2 | Trail grading (0-5 cu ft/lf) | 7,670 | $3.00 | lf | $23,010.00 |
| 3 | 10' wide multi-use asphalt trail | 7,670 | $35.00 | lf | $268,450.00 |
| 4 | 2' wide gravel shoulder (both sides) | 15,340 | $6.00 | lf | $92,040.00 |
| 5 | 14' wide boardwalk | 0 | $280.00 | lf | $0.00 |
| 6 | Bike/Ped Bridge (1) | 25 | $550.00 | lf | $13,750.00 |
| 7 | Drainage culverts (36" reinforced concrete pipe) | 0 | $40.00 | lf | $0.00 |
| 8 | Seeding or mulching trail edges (5' both sides) | 15,340 | $0.12 | sf | $1,840.80 |
| | | | | | |
| **C** | **On-Road Facility** *(0 lf)* | | | | |
| 1 | Pavement Bicycle Arrow Markings (thermoplastic) | 0 | $60.00 | ea | $0.00 |
| 2 | Crosswalks | 0 | $500.00 | ea | $0.00 |
| | | | | | |
| | | | | | |
| **D** | **Utilities** | | | | |
| 1 | Solar powered light | 3 | $5,400.00 | ea | $16,200.00 |
| 2 | Solar powered light pole | 3 | $1,300.00 | ea | $3,900.00 |
| 3 | Emergency phones | 2 | $2,500.00 | ea | $5,000.00 |
| | | | | | |
| **E** | **Signage** | | | | |
| 1 | Mile Markers | 1 | $200.00 | ea | $200.00 |
| 2 | Trail and street regulatory/warning signs | 1 | $200.00 | ea | $200.00 |
| 3 | Directional signs | 1 | $200.00 | ea | $200.00 |
| 4 | Educational signs | 2 | $300.00 | ea | $600.00 |
| | | | | | |
| **F** | **Site Amenities** | | | | |
| 1 | Benches | 2 | $400.00 | ea | $800.00 |
| 2 | Bicycle racks (holds 9 bikes) | 1 | $400.00 | ea | $400.00 |
| 3 | Drinking fountains (with pet fountain) | 0 | $2,000.00 | ea | $0.00 |
| 4 | Picnic tables/ tables | 3 | $500.00 | ea | $1,500.00 |
| 5 | Trash receptacles (32-gallon, steel) | 1 | $250.00 | ea | $250.00 |
| 6 | Bollards (3 per trail/road intersection) | 3 | $300.00 | ea | $900.00 |
| 7 | Parking (10-car lot) | 0 | $20,000.00 | ea | $0.00 |
| 8 | Parking (20-car lot) | 0 | $50,000.00 | ea | $0.00 |
| | | | | | |
| | | | | Site Development Total | **$429,240.80** |
| | | | | | |
| | **Segment Subtotals** | | | | |
| **A** | **Demolition** | | | | **$40,651.00** |
| **B** | **Off-Road Facility** | | | | **$429,770.80** |
| **C** | **On-Road Facility** | | | | **$0.00** |
| **D** | **Utilities** | | | | **$25,100.00** |
| **E** | **Signage** | | | | **$1,200.00** |
| **F** | **Site Amenities** | | | | **$3,850.00** |
| | **SUBTOTAL** | | | | **$500,571.80** |
| | **Contingency** | | | 15% | **$75,085.77** |
| | | | | | |
| | **SEGMENT TOTAL** | | | | **$575,657.57** |
| | | | | | |
| | *Note: Does not include the following: construction staking, rock and unsuitable soils excavation, permitting fees, contractor overhead, profit, mobilization, bonds, taxes* | | | | |

# SOUTHERN SECTION: SEGMENT 20






0 250 500 1,000 1,500 2,000 Feet

Neuse River
MST Mainline
Tributaries
10' Contours
Floodway
100 Year Flood
Marsh (JC Land Cover Data)
Stream Crossing
Parcels
150' Corridor Width
1234-56-7890 NC Parcel Pin#
ABC Zoning/Land Use